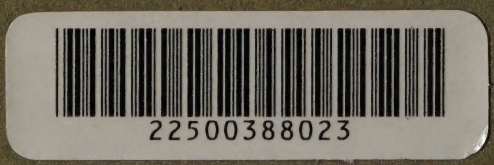
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AN ILLUSTRATED MONTHLY DEVOTED TO

MEDICAL AND SURGICAL SCIENCE.

(TO OCTOBER, 1898)

EDITED BY

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BOARDMAN REED, M.D.

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ORIGINAL COMMUNICATIONS.

A CASE OF AKROMEGALY.

By A. FERREE WITMER, M.D.,
Instructor in Nervous and Mental Diseases in the Philadelphia Polyclinic, Assistant in Physiologic Psychology in the University of Pennsylvania.

As fully one hundred and thirty cases of akromegaly or pachyakria have been reported since the disease was described by Marie in 1886, it is not uncommon. Certain conditions not usually present in this disease make the following case of particular interest.

Ann F., age 55, unmarried a native of the north of Ireland, immigrated to this country at the age of nineteen. As is usual in akromegaly the patient can give no time of onset for the disease, but thinks that her face began to enlarge about fifteen years ago.

A photograph (Fig. 1.) taken in 1876 shows a woman of large frame, of about 72 kilos weight, with over development of the lower face including the pinna of the ear. It is highly probable, therefore, that the disease in this patient began at a time antedating the photograph. Long has recently reported a case of a man in whom the disease began during

Fig. 1.

his eighth year. A case of probable onset during the first year of life is quoted by Collins who is inclined to believe that the disease may be congenital. This view is opposed by Marie, who positively states that akromegaly is a disease of early adult life.

The patient applied for treatment of a dull intermittent pain about the knee-joint. Examination revealed none of the objective signs of rheumatic fever, nor did her history indicate a previous attack of this disease. The joints throughout the body were freely movable and non-crepitant. Ranson, [1] reports two cases of akromegaly and lays particular stress upon the joint-pain. In addition to pain the patient complained of somnolency so severe that she falls asleep while at work or at meals. On several occasions she has fallen soundly asleep while carrying a coffee-cup to her mouth. Her rest at night is light and broken by dreams. This condition of perverted sleep has been present for two years, is as apt to occur in the morning as in the evening hours, and is increasing in degree. That somnolence may occur in akromegaly has been pointed out by Packard [2] who has reported a case with this symptom.

No history of any disturbing influence which might have induced the patient's present condition could be found. Her early life was uneventful; her hours filled with hard work. There is no neurotic family tendency other than that in a niece who became profoundly melancholic after her mother's death. Three years ago the patient complained of vertigo, particularly marked when she raised her eyes quickly. At this time she also had a slight dull headache, which occurred most frequently in the early morning. There has never been any disturbance of the special senses, but she has noticed that her tongue is growing larger and that it apparently varies in size at irregular intervals. Her voice has become deeper; the speech, slow and muffled. Her appetite is slightly in excess; the thirst, constant; the urine is voided frequently and in large quantities. At times she has attacks of severe diarrhea, which are not induced by indiscretion in diet, and are not relieved by ordinary therapeutic measures. The menses ceased about twelve years ago; no abnormality was noted throughout their course. Perspiration has been excessive during the last three or four years. There have been occasional hot, followed by cold, flushes, but no paresthesia. The extremities are always comfortably warm and never appear cyanosed. She recognizes heat and cold normally. The mentality is not impaired other than the memory which is slightly defective, probably due to increasing years. That the hypertrophy of tissue is continuous is evidenced by the fact that she now wears a number seven shoe instead of a number five which fitted her three years ago.

The present appearance of the patient is shown in the illustrations, (Figs. 2-3.)

1 British Medical Journal, 1895.

2 American Journal of Medical Sciences, 1892.

FIGURE 2.

FIGURE 3.

The contrast in Fig. 4 is a woman fifty years of age, 64 kilos

FIGURE 4.

in weight, and 163 cm. in height. The weight of the patient is 90 kilos, the height, 164 cm. Measurements give 60 cm. for the circumference of the cranium in the occipito-mental direction, and 70 cm. from the vertex to the angle of the lower jaw, about normal. Her hair is abundant, and natural in color and consistency. The skin is puffy and pits slightly on pressure over the dorsum of the hands; three or four small warty growths are found on the extensor surfaces of the fore-arms. The face is elongated but symmetrical, and the supraorbital arch is not prominent. The eyelids are enlarged, particularly the inferior; the nose is thickened; the cheek-bones are prominent; the cheeks are flattened; the lips protrude; particularly the lower, which is greatly hypertrophied; the pinnae of the ear are enlarged, the lobe thickened and pendulous; the tongue is large, flabby and slightly fissured; the breath is heavy, and the odor aromatic.

Dr. Walter Freeman made an examination of the naso-pharynx and reports: "External nose much thickened, and the nasal fossae markedly narrow, when we consider the size of the nose; the cartilage of the septum is 6 to 8 mm. in thickness (normally 2 to 4 mm.) The tongue is thick and large and shows traces of ulceration at the edges, although no indentation from tooth-pressure is at present seen. The teeth are wide-

ly separated; the alveolar ridge of the lower jaw is very prominent; the gums are retracted and many of the teeth affected by pyorrhea alveolaris. (The teeth are well preserved.)

The saliva is abundant and very fluid. The palate is high-arched and very narrow in front. The throat is very small; the right tonsil is absent, the left, very small; the uvula is relaxed and red. The naso-pharynx is abnormally small. Sensation in the fauces is considerably diminished. The larynx externally is large and broad, the pomum adami, flat as is usual in the female. Internally the laryngeal lumen is small and the epiglottis thickened.

Summary: - From the thickening of the septum and the smallness of the laryngeal opening, in contrast with the size of the larynx externally there has been, I consider, an increase in the size of the cartilages.

The neck is short and thick; the circumference below the hyoid bone measures 45 centimeters; the thyroid is not prominent; no retro-sternal dullness is noted; a slight cervico-dorsal kyphosis is present. The frame is generally enlarged, the increase in size being due to increase of the soft parts and not to increase of the bony structure. This is shown in the accompanying skiagraph taken in the Pepper Clinical Laboratory by Dr. Leonard. When contrasted with a skiagraph of the normal hand (Fig. 6.), the bones of the hand show slight degenerative changes neighboring the smaller articulations; ankylosis of the little finger is the result of trauma in early life. The outline of the bones of the foot are not as distinct as those of the hand, but are sufficiently clear to show lack of enlargement of either the shafts or terminal portion of the bones. The increase of the soft parts, has almost completely destroyed the normal contour. The malposition of the small and adjoining toes are doubtless due to cramping; as the bony tissue was not enlarged it was inferred that the general bodily enlargement was not due to increase of the bone. A fluoroscopic examination of the lower face and chest confirmed this view.

The chest immediately beneath the shoulder-girdle measures 108 cm.; below the breast, 110 cm. The length of the left hand is 22 cm.; the length of left index finger, 22 cm. The circumference of left thumb at base is 8 cm.; of left middle finger at the base, 9 cm. The length of the left foot is 28 cm. The width of left foot at the instep, 26 cm. The length of right foot, 27 cm.; the width at the instep, also 27 cm. There is no disproportionate increase in size along the ulnar side of either arm.

The heart sounds are feeble; no adventitious sound is appreciable; the pulmonic second sound is normal; the respiration is shallow; the lungs are normal; the pulse is full and regular,

The urine is low in specific gravity, 1008 at one examination, but contains no tube-casts, no albumen, no sugar, and no peptone.

FIGURE 6.

FIGURE 5.

The nails, so commonly longitudinally striated in this disease, are here normal.

The eyes were examined by Dr. W. Campbell Posey, who reports: "that both eyes are slightly prominent: there is no disease of the external tunics or adnexa; the pupils are 2½ mm. in diameter, and respond equally and freely to light accommodations and convergence. The optic nerves are slightly discolored (reddish-gray), probably dependent upon a low grade choroiditis. Vision in the right eye is $\frac{5}{12}$; in the left eye, $\frac{5}{8}$; the reduction in visual acuity being due to far-sighted astigmatism in both eyes. The visual fields are normal both for form and color. "As a resul of the opthalmological examination, it is evident that there is no pressure anywhere on the optic tract."

The rate of sense-perception was tested in the laboratory of psychology in the University of Pennsylvania; with the following result:

Reaction to sound, ... 2840 σ
" " touch (right hand) 1710 σ
" " " (left hand). . 2300 σ
(σ is .001 of a second)

Both sound and touch perceptions were found to be greatly retarded and variable. The rate of movement is a little quicker than normal ,i.e., extension of the right hand, 106; of the left hand, 74; flexion of the right hand, 125: of the left hand, 77. The sense of pain as tested by Cattell's algometer gives for the right hand 7.0 kilos; for the left hand, 5.5 kilos. The normal is a little more than 3 kilograms. On the posterior surface of the left hand two points are recognized as such at 75 mm. distance. On the right fore-arm, at 70 mm. distance. The normal is usually given as 31 mm., but this is probably too high. It is noted therefore that sensation is generally dulled, that on the back of the hand being of about the same degree as that on the back of the body in the normal subject It is of interest in this connection to recall that the sensibility of the fauces was also considerably diminished. The dynamometer registered 24 lbs. pressure with the right, and 22 with the left hand, both of which are about normal for a first attempt. The knee-jerks are sluggish and equal, no clonus is present; station is normal; gait is quick.

As Virchow has found post-mortem, in akromegaly, conditions in the thyroid similar to those noted in myxedema, the patient was placed upon an extract of thyroid body with the hope of obtaining at least a part of the results which are so striking with this treatment even in the adult type of myxedema. The thyroid was given in doses of five grains, repeated three times daily for a period of three months without causing any change other than a slight diminution in weight (one kilo).

As perverted function of the pituitary body due to pressure of new growth or to change within the bodily structure of the gland has been noticed in a comparatively large number of cases, pituitary extract was given with the hope of reestablishing this function. An extract of the

gland was given in increasing doses until twelve grains were taken daily for a period of three months. Improvement, if at all present, is exceedingly slight.

A CASE OF TETANUS NEONATORUM WITH AN UNIQUE ETIOLOGY:

A CASE OF PELIOSIS RHEUMATICA.

By Charles J. Aldrich, M.D.,
Neurologist to the Cleveland General Hospital and Dispensary.

Tetanus neonatorum is not such an uncommon disease as to merit through its rarity the report of a single case. But for reasons that will appear, the following case seems worthy of record, along with a photograph of the child in a typical tetanic spasm induced by so slight an irritant as a puff of breath on its face.

Tetanus Neonatorum.

C. H., a white female infant, six days old, of good size and well formed, the second child of healthy German parents, and born after a short normal labor.

On the evening of the second day in order to control a slight oozing of blood from the umbilical cord the attending midwife bound on the umbilicus a fresh bit of sod taken from the garden. The child did well until the second day following the separation of the cord when it seemed unable to nurse. The mother imformed me that when she attempted to suckle the child its little face would pucker up and she could not get its mouth open wide enough to take in the nipple.

Examination of the infant excited a well developed and characteristic tetanic spasm: retracted head, arched and rigid back; trismus, in fact, all of the marked peculiarities of violent tetanus. The circulation was rapid, the temperature, 103° F.; respiration was rapid, but regular, except while in spasm, when it was so disturbed as to deeply cyanose the little sufferer.

Artificial heat from sand bags, rectal feeding, chloral hydrate, bromides and hyoscine failed to relieve the child; and it died in tetanic spasm on the eleventh day after birth.

Guinea-pigs inoculated from the unhealed umbilicus did not develop convulsions, and a post-mortem was refused.

A clear explanation of the probable scource of the disease failed to convince the German midwife of my superior wisdom, as she assured me that she had applied the same remedy (fresh sod) to the oozing umbilicus many times, always with the best of results, and still thought it to be a preferred remedy.

A CASE OF PELIOSIS RHEUMATICA.

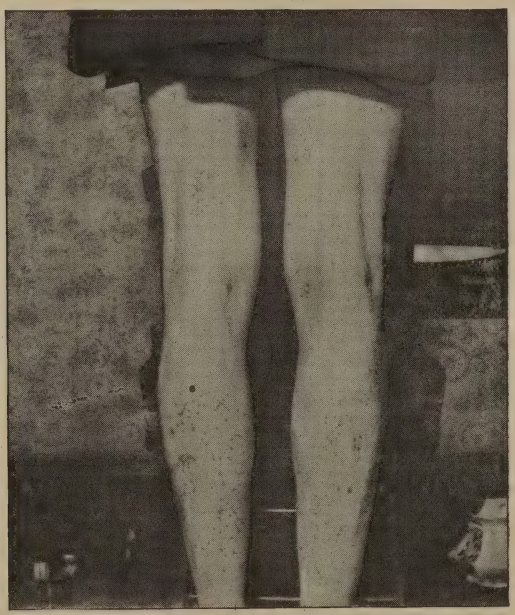
The relation that the form of purpura hæmorrhagica which Schonlein described under the title of peliosis rheumatica, bears to rheumatism is an unsettled question. Most clinicians, however, are disposed to recognize that one type of purpura hæmorrhagica is accompanied by joint affections with sufficient frequency to deserve the distinctive appellation of rheumatic purpura or peliosis rheumatica.

The following case is reported as having some claims for consideration in the discussion of this interesting question.

Jas. D., a single, white American, aged 36 years. He is a large, powerful, healthy-looking fellow; a bricklayer by occupation. He has never been sick, with the exception of two attacks of gonorrhea and a resulting stricture of the deep urethra. He is a rather free drinker and his parents are healthy but intemperate; the mother has never been sick, but the father, in his early days, suffered much from rheumatism; but neither parent nor any of their relatives were "bleeders" or suffered from purpuric disease. The patient is the only child. No history of hereditary or acquired syphilis can be obtained.

In the fall of 1893 he took a cold, and after a feverish night, made sleepless by aching pains in the knees and ankles, by daylight he discovered his nether limbs thickly studded with small blood-red spots. These disappeared in a few days, passing through the stages of color-change incident to a contusion. About two months later the spots returned, accompanied by fever, pains, and general malaise.

I first saw him in December, 1893, when he was suffering from retention of urine. He then told me of three attacks and promised to let me see him when they again appeared. On Feb. 16th, 1894, he appeared at the office limping from swollen and painful joints. His temperature was 103°F., and his lower limbs and forearms were covered with typical hemorrhagic spots. In June of the same year he reappeared with the same clinical history and presenting the identical appearance as before. The accompanying photograph was taken at that time. He has consulted me at my office or I have called to see him on the following dates, and I have found at each visit the same clinical picture as heretofore drawn:- Oct. 18, 1894; Jan. 4, 1895; Nov. 12, 1895; March 8, 1896; Jan. 30, 1897.



Peliosis Rheumatica.

His urine never contained albumen, blood, or sugar. He never presented any evidence of internal hemorrhage, and although the eye was repeatedly examined, at no time was there signs of hemorrhage. Once I was called to attend him for quite a severe bleeding that followed the extraction of a lower molar. Although he has had several other teeth drawn during the last three years this was the only one that bled excess-

ively. On three occasions he complained of sore throat accompanying the purpuric attack.

He recognized the aid to a prompt recovery which salicylate of soda afforded him; it eased his pain and so quickly dissipated joint-swelling, fever, and purpura, that he invariably asked for the "nasty sweetish stuff."

According to Kaposi [1] a succession of relapses extending over some time is accompanied by nephritis or an organic heart-lesion; he has reported two cases that gradualy developed aortic insufficiency. Kinnicutt [2], Molliere [3] and others have detected cardiac murmurs during the course of peliosis rheumatica. Oliver [4] believes in the association of rheumatic purpura and ulcerative endocarditis; and the writer has twice observed purpuric eruptions about the chest in ulcerative endocarditis, although no clear history of rheumatic complication was obtainable in either case.

On the other hand, Immerman [5], Atkinson [6], Osler [7] and others assert that this form of purpura is not complicated by endocarditis; and this case has been under my care for nearly four years without a sign of cardiac disturbance, and repeated search has failed to discover casts, albumen or blood in the urine.

Schonlein declared the disease to be hemorrhagic in character, accompanied by extravasations into the cutananeous layers without internal hemorrhages; and as before remarked this case at no time presented evidence of internal hemorrhage.

Kaposi [8] and Neuman have observed cases that manifested a pronounced tendency to recur annualy, spring and autumn being the usual seasons for the outbreaks. The case reported certainly shows this tendency. Kaposi [9] mentions that severe bleeding from the gums has been observed, and Scheby-Buch [10] says that bleeding from the mucous membranes occasionaly occurs.

The arguments offered for the rheumatic origin of this case are: the universal association with joint symptoms; the occurence of sore throat; excited by conditions of weather, seasons of the year, and amount of exposure (all recognized as exciting causes of rheumatism); no indication of other infection; and the prompt relief obtained by the administration of salicylate of soda.

744 PROSPECT.

1 Hautkrankheiten, 1889, p. 277.
2 Kinnicutt, Archives of Dermatol., vol. i., p. 193., 1874-5.
3 Molliere, Ann. de Dermatol., v., p. 44.
4 Oliver, Internat. Clinics, Jan., 1892., p. 12.
5 Immermann, Ziemssem's Cyc. of the Practice of Med., vol. xvii., p. 247.
6 Atkinson, Pepper's System of Med., vol. ii., p. 189.
7 Osler, Handbook of Practice, p. 345.
8 Kaposi, loc. cit.
9 Kaposi, loc. cit.
10 Scheby-Bush, Deutsche Arch. f. Med., B. xiv., p. 490.

IMPORTANT INDICATIONS AND CONTRA-INDICATIONS FOR MASSAGE OF THE ABDOMEN, WITH REPORT OF CASES SHOWING ITS EFFECT UPON THE SECRETION OF THE GASTRIC JUICE.

By BOARDMAN REED, M.D.,
Philadelphia, Pa.

For many years past my attention has been frequently called to the strikingly good effect of general massage, skillfully given in cases of neurasthenia with insomnia. Patients for whom medicine had done little or nothing, began speedily to gain in strength, color, and ability to sleep, after being put upon this treatment. They usually reported at the same time that their digestion was improving and often that their previously constipated bowels were begining to move spontaneously. It occured to me that these cases of neurasthenia had probably been a result of indigestion and that the massage produced much of its good effect by a favorable influence upon the digestive processes. Experience has confirmed this view and has demonstrated to my satisfaction, that massage, especially in the form of deep kneading(pétrissage)over the abdomen, not only increases the tonicity of the exterior abdominal muscles as well as the entire muscular apparatus of the stomach and intestines, but also the glandular functions in both. In patients under this form of treatment I have frequently been able to demonstrate a marked increase in the secretion of the gastric glands.

Recently, I have been observing carefully a series of cases in which abdominal massage has been either the only or chief form of treatment. These were mostly cases of neurasthenia with the stomach more or less involved. In a larger number of cases under treatment by massage together with other therapeutic measures, the functional work of the gastric glands has been greatly enhanced; but the difficulty in many of these is to determine to what part of the treatment the result has been due. As pointed out by me in papers previously published, a diet of meat chiefly, and nearly all of the tonic remedies usually prescribed for neurasthenia, tend to increase the secretion of hydrochloric acid, and in a paper read before one of the sections of the American Medical Association in Philadelphia, I reported briefly the results of experiments, showing beyond question that the administration of small doses of hydrochloric acid after meals, throughout a period of four to six weeks, rarely fails to augment decidedly, the secretion of the same acid by the stomach.

In the following cases, however, abdominal massage was the main dependence in the way of treatment; no drugs were given beyond a laxative as required. The diet was a mixed one, from which sweet things, hot or fresh bread, shell-fish and other highly fermentable articles were excluded:

Case I. — Chronic gastric catarrh with slight intestinal catarrh in a professional man, aged 49. There had formerly been an excess of hydrochloric acid, but under treatment this had been reduced and for several months the percentage of that acid had ranged between .040 and .050. After three weeks of abdominal massage, twice a day — morning and night — following the drinking of a glass of water, the hydrochloric acid had increased to .114. No drugs had been given meanwhile, except small laxative doses of extract of cascara at bedtime.

Case II. — Neurasthenia with anemia and chronic gastritis. On March 13th, 1897, the proportion of free hydrochloric acid, by the Mintz method, was found to be .065; total acidity, 54. With no active treatment except abdominal massage, meanwhile, a test on April 15, one month later, showed free hydrochloric acid .091; total acidity, 59.

A large number of cases have occurred in my practice in which a total absence of hydrochloric acid, pepsin, and the rennet-ferment persisted in spite of both massage and the administration of hydrochloric acid along with various other roborant measures, showing the existence probably of gastric atrophy; but in other cases of chronic gastric catarrh the amount of free hydrochloric acid was finally restored under an energetic treatment by means of massage and galvanism together with the administration of both hydrochloric acid and pepsin persevered with for long periods — in one instance for most of the time during a period of five or six months, with lavage employed in addition during a part of the time.

Since the welfare of the patient has always seemed to me greatly more important than even the establishment of a possible truth in medical science, I have never depended upon massage alone in any case of anacidity or achylia gastrica, but as the indications for supplying the deficient pepsin and acid seemed so positive, and practical advantages derivable therefrom have often been so immediate and decided, I have generally administered these remedies as the first step, and proceeded afterward to add to the treatment, massage, electricity, exercise, and all other practicable building-up measures. The result has usually been favorable. When the gastric glands failed to respond, the internal remedies mentioned and all attempts to reestablish digestion in the stomach were abandoned, but a perseverance with massage and the other physical or mechanical measures have almost uniformly so improved the intestinal digestion that the patients have recovered finally a good degree of health.

The following cases indicate that massage in certain very sensitive pa-

tients is capable not only of aggravating but even of producing hyperchlorhydria.

Case III. — Neurasthenia with chronic catarrh and constipation in a literary man aged 50, who would not give up his occupation, and often overworked. He had been under treatment at times during the past three years. Tests, after the Ewald breakfast, had shown a small excess of hydrochloric acid. After long having had a virtually normal gastric juice, for some time during the past autumn there had been a deficiency of hydrochloric acid coinciding with increased fermentation in both the stomach and intestines and an unusual debility. An hour after the Ewald breakfast on December 1st, there was found to be a total absence of free hydrochloric acid. He was ordered massage together with dilute hydrochloric acid in ten drop doses three times a day, an hour after each meal. The dose was to be added to half a glass of water and taken by sips during the hour following. He did not report again until at the end of three weeks, when his medicine was discontinued, though the massage was not. A day or two later the Ewald test-breakfast was given him and the result showed the highest degree of acidity ever found in his stomach-contents — total acidity 82, and free hydrochloric acid .167. It was afterward learned that he had been given an unusually vigorous general and abdominal massage treatment at nine o'clock the night before, and then having awakened very early on the morning of the morning of the test, he had tried the experiment of actively massering his own stomach in the hope of obtaining another hour's nap. An hour afterward he took the test-breakfast. During the day following this test he was required to eat and drink exactly the same as on the preceding day, and to pursue the same routine in all respects except to have no massage treatment. The result was; total acidity 46; free hydrochloric acid .087 — only a little more than half the amounts respectively shown by the test of the day before.

Case IV. — Marked neurasthenia in a gentleman, aged 60, with a history of very excessive hyperchlorhydria and frequently recurring attacks of gastralgia for several years. He came under observation early in November. In this case there is a strong suspicion of gastric or duodenal ulcer. Various kinds of treatment had been tried in New York and elsewhere, with temporary relief of the pain, but never with any notable effect upon the excessive secretion of hydrochloric acid, which was said to have been on one occasion four times the normal amount. My first test showed a total acidity of 112, and free hydrochloric acid .124. He was placed upon a diet as bland as possible to be obtained in a hotel and ordered a combination of alkalies to be taken in moderately full doses two hours after each meal. Massage was also prescribed to be given daily over the whole body except the stomach, though the masseur was directed to knead over the course of the colon very gently. At the end of eight days, a second test-meal showed the total acidity to be 104, and the

free hydrochloric acid, .219. Close inquiry elicited the fact that the masseur had misunderstood my directions and been giving full and rather vigorous massage over the entire abdomen, including the stomach. This doubtless accounted in the main for the aggravation, though his food had included too much meat and had been more highly seasoned than was desirable, which must have contributed to the result. He was now removed to a private room in a hospital, placed upon a most careful diet, and no treatment of the abdomen permitted except the lightest effleurage over the bowels. Under these better conditions the proportion of acid was speedily reduced to the normal, though it has shown a strong tendency to rise again, requiring a continued use of alkaline remedies once or twice a day to hold it down. This case is still under treatment. There has never been a free hemorrhage from the stomach or bowels, and no local tender points can be found either in front or at the back, but there has been vomiting as well as much pain, and the existence of ulcer is quite possible.

The inference from the last two cases is obvious. Considering the serious and often disastrous results to health that may come from hyperchlorhydria with its train of intestinal and nervous symptoms, and the readiness with which it can be greatly increased by massage of the abdomen, this powerful remedy should be prescribed with great carefulness and with more exact dosage than is now customary; and it needs to be remembered that in many neurasthenic patients with a tendency to excessive secretion of the gastric glands, even very moderate massage over the abdomen can set up this troublesome condition with a resulting aggravation of the constipation, as well as of the insomnia and all the nervous symptoms.

It may be well here to summarize in tabular form, the conditions under which massage of the abdomen has been found in my experience particularly useful:

1. – Chronic gastritis in all its forms excepting those accompanied by hyperchlorhydria.
2. – Anacidity or subacidity, except when dependent upon acute gastritis or carcinoma.
3. – Gastrectasia, not dependent on cancer.
4. – Atonic conditions of the stomach walls, whether progressed to the stage of dilatation or not.
5. – Displacements of the various abdominal organs including
   a: Gastroptosis,
   b: Nephroptosis, except in cases where the displaced kidney has become excessively tender on pressure.
   c: Enteroptosis.
6. – Chronic intestinal catarrh, not complicated by deep ulceration.
7. – Dilatation of the intestines.

8. – Constipation from unknown causes. In many such cases massage often succeeds.

9. – In a group of symptoms which comprise especially tenderness over a region three or four inches in diameter including the umbilicus as its centre and a marked pulsation of the abdominal aorta in the entire epigastric region. These symptoms have been assumed, with how much of truth I am not prepared to say, to denote congestion of the solar plexus. They are often met with in practice and may be the result of auto-infection from the gastro-intestinal tract. My experience shows that these symptoms are usually benefited by gentle kneading of the abdomen in connection with careful attention to diet.

The following are the principal contra-indications for massage of the abdomen:

1. – Ulceration in any part of the stomach or intestines.
2. – Cancer of any of the abdominal organs.
3. – Acute inflammation in any part of the gastro-intestinal tract.
4. – Hyperchlorhydria.
5. – Prolapsed kidneys which are acutely sensitive to palpation.
6. – Aneurism of any of the abdominal or thoracic arteries.
7. – During the menstrual period, when the flow is excessive or when there is a tendency to menorrhagia.
8. – In fatty degeneration or marked dilatation of the heart and advanced phthisis, especially with a tendency to hemoptysis, abdominal massage should be practiced – if at all – with much care and gentleness.

In addition to the foregoing, Boas, on the authority of Dr. Zabludowski (a well known masseur and writer on massage in Berlin) mentions as another contra-indication, a tense condition or kind of tetanic contraction of the recti muscles, which is so often seen in cases of neurasthenia. In such cases, Zabludowski advises "hands off." Zabludowski's method (as I happen to know from personal experience of it, since I took a number of treatments from him when in Berlin in 1895) is one in which tapotement and a peculiar mixture of violent slapping and vigorous kneading predominate. These procedures would be harmful, of course, under the conditions above referred to, but the gentle kneading which is given to such patients under my personal direction, has been found uniformly helpful and curative to the underlying disease, at the same time that it is soothing to the over-tense muscles.

Boas would also permit massage in cases of gastric ulcer, except where adhesive inflamation has attached the stomach to adjacent organs, and very properly advises caution in massering the stomach or intestines when over-filled with contents or even with gases. It seems to me, however, wiser to avoid massage of the abdomen altogether in the cases in which there are positive signs or symptoms of ulcer, and especially when these (as nearly always happens) include hyperchlorhydria.

Most of the foregoing contra-indications are self evident, and need

only to be mentioned. As to hyperchlorhydia, the effect of abdominal massage in stimulating the secretion of hydrochloric acid has already been discussed.

All of the teaching on massage with which I am familiar, needs to be supplemented by the information that it is generally unsatisfactory and often injurious to massée any abdomen without having the position of the transverse colon and inferior border of the stomach first carefully determined. The instruction in the books treating of this subject all proceed on the assumption that the stomach and transverse colon are in their normal positions, whereas, as I have hitherto reported, in three-fourths of the women whose abdomens have been examined by me, and in many of the men, the lower border of the stomach and the transverse colon are below the umbilicus.

Penzoldt, for instance, in discussing massage quotes from Hoffa and gives plates from the work of the last named writer, which are misleading. These plates illustrate by zigzag lines and arrow-marks the course which the hands should follow in executing pètrissage of the abdomen; and yet, literally followed, these illustrations would lead the masseur to so manipulate as to retard the emptying of the stomach when that organ chances to be moderately enlarged or displaced downward, as it so very generally is in dyspeptics. These directions would require the masseur to pass the doubled hands nearly around a circle (which has for its centre the umbilicus) crossing the median line midway between the lower end of the sternum and umbilicus. The arrow-marks require this curved line to be followed from the right side below around the upper part of the curve to the left. In making this procedure I find that many of even the best taught masseurs complete the circle by passing fron right to left above and from left to right below across the abdomen. By this means, in the case of the ordinary dilated or displaced stomach, (which, let it be distinctly understood, includes the great majority of cases requiring abdominal massage) a two-fold harm is done. Deep pressure in these directions retards and obstructs instead of favoring both the emptying of the stomach and of the transverse colon, which latter in its most frequent abnormal position is almost directly under the course followed by the hands of the masseur in the lower part of the circle above described. In these cases I always require the pétrissage to be given in exactly the opposite directions—crossing the abdomen from right to left below, which helps instead of hindering the emptying of the colon, and from left to right above, which helps instead of hindering the propulsion of the stomach contents toward the pyloric orifice.

In cases of chronic gastric catarrh, it is well to have massage given in the morning, fasting, the patient having first taken one or two glasses of water which may be medicated with some alkali or an antiseptic when advisable. This is much less efficient in cleansing the gastric walls of

the adherent viscid mucus than lavage, but may help in patients for whom the latter is impracticable.

The value of massage of the abdomen in cases of malnutrition associated with indigestion and with deficient secretion of the various glands involved, can hardily be over estimated. In suitable cases and when properly given under the physician's personal supervision it accomplishes very much more than drugs, stimulating as it does, every gland, muscle, and other tissue within reach of the operator's fingers. In this way the metabolic processes are all quickened. More food is transmuted into blood which in turn is better purified by a more active elimination of the toxic products of tissue metamorphosis, and a larger amount of richer, purer blood, is continually brought into contact with all the parts of the body.

In this way, what was a vicious circle is broken up and the conditions are so changed that the vital processes can proceed with more activity toward a perfect restoration of health.

SPECIAL TRANSLATION.

THE ETIOLOGY AND PATHOGENESIS OF YELLOW FEVER. [1]

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SECOND MEMOIR

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The symptoms, the lesions, and the bacteriology of yellow fever, in both man and animals, indicate the existence of a specific poison generated by the bacillus icteroides and capable of producing, by itself alone, the morbid picture that we have heretofore described.

Supplementing this evidence, the small number of bacilli found in the tissues and the violence of the symptoms which are induced in dogs, immediately after the intravenous inoculation of cultures in relatively small quantities, give rise to the supposition that this poison acts in a very energetic manner. It has been very interesting to study this action in the animal organism.

For these researches, I have always used a culture of 15-20 hours growth, filtered through a Chamberland tube, and grown in ordinary bouillon of peptonized meat. The toxin thus prepared, has been tested on the guinea-pig, the rabbit, the dog, the goat, the ass, and the horse. I reserve for a special memoir the experiments relating to man.

THE INTOXICATION IN GUINEA-PIGS AND RABBITS.

These animals do not constitute a good field for the study of this toxin; the results obtained with them, by the injection of filtered cultures, has not been conclusive.

If the doses injected were very large, (15-20 c. c.) guinea-pigs died in 24 hours; smaller doses, (2-5-10 c. c.,) caused a progressive diminution in weight which continued for 10 - 12 hours, after which, in general, the animals recovered, and regained their original weight.

If, instead of the filtered cultures, we used cultures sterilized by ether, the toxic power was much increased; a dose of 1 c.c., injected subcutaneously, caused a diminution of 15 to 20 grams in the weight of a guinea-pig of 300 grams in 24 hours, but this effect was transient. The fatal dose for a guinea-pig of 300 grams weight was, at least, 10 c. c., injected at one time; the animal died after 10, 20, 30 days.

The lesions which we found at the autopsy, both in acute and chron-

1 Annales de l'Institut Pasteur, September 25, 1897.

intoxication, were of no special interest. In the acute cases, they presented the phenomena of general congestion; in the chronic cases, the picture of cachexia. In rabbits, the resistance is a little less than in guinea-pigs.

The best method of inoculation for the production of intoxication is the intravenous. Doses of 2-5 c. c. of a filtered culture are without effect; but, from doses of 10 c. c. animals weighing a kilogram died regularly in 7 - 8 days, without presenting in the mean time any symptom that were of special interest.

The Intoxication in Dogs.

The toxin produced in these animals the same symptoms and the same lesions as the virus. Here, as before, the quantity of toxin required for making sick or for killing a dog is extremely variable. It is always considerable, and the effects following subcutaneous injection differ from those of intravenous.

The subcutaneous injection of doses of 5-10 c. c. produces enormous local tumefactions, with slow absorption, but it is absolutely incapable, even in large quantities, of causing the symptoms which are characteristic of yellow fever, in the dog. It is probable that, at the point of injection, there is an inflammatory process or rapid, extreme necrosis which greatly impedes the diffusion of the toxin in the organism. The same feature has been observed in other animals and in man.

If, instead of the filtered cultures, we make subcutaneous inoculations with cultures sterilized with ether, the local phenomena are much more serious and more accentuated; but, with the exception of the fever, which continues for several days, and a malaise, easily explained by the great swelling and the severe local pain which is the general accompaniment, we have never observed any interesting phenomena.

It appears that the toxin inoculated under the skin is almost neuralized, digested, and destroyed, by the enormous numbers of leucocytes that group themselves immediately around the point of inoculation. They very often form a large purulent mass, which in time ulcerates through the skin and opens on the outside.

Again, if we repeat the subcutaneous inoculation of large doses for several successive days, we have never succeeded in producing vomiting, gastroenteritis, photophobia, etc., which are produced so easily by the intravenous injection of the virus, and which also tend to follow the intravenous injection of the toxins.

We have observed, however, that in the dogs, which have received the toxin for a long time by subcutaneous inoculation, there is a diminution in body-weight, an obstinate coryza which is accompanied by an abundant catarrh of the nasal mucous membrane, and a diffuse and painful swelling of all the subcutaneous tissues around the point of inoculation.

The intravenous injection may be easily made in any of the veins

which we see on the internal aspect of the thighs. A dose of 24 - 40 c. c. is sufficient to immediately induce very serious symptoms in dogs weighing 3 to 4 kilograms.

Immediately after the injection, the animal presents no particular symptoms; but 10-14 minutes afterwards, he is taken with a chill which is generally continuous; in a short time the evacuations are diarrheic, and there is a lacrimal secretion; finally, vomiting appears, violent and continual, alimentary at first, followed by mucous, and then the whole of the gastric contents are evacuated, and an early hematemesis follows.

If the dose has been moderate, the dog recovers from this violent attack, which we compare to poisoning produced by an energetic emetic; but if the quantity of toxin is large (150-200 c. c.) or if it is repeated on several successive days and increased progressively, the dog finally succumbs, and presents anatomic lesions similar to those described as having been produced by the living virus. These lesions are usually as follows: The thorax contains a serous and abundant exudate (60-100 c. c.) consisting for the most part of a wine-colored, transparent fluid (hemoglobinemia); the liver is dried and shows large patches of yellow color, which on microscopic examination are seen to be the hepatic cells which have completely undergone fatty degeneration, and have liberated innumerable drops of oil; the spleen is normal in appearance; the kidneys present the appearance of an acute parenchymatous nephritis; the bladder is contracted and contains a few drops of albuminous or hematuric urine. The gastric mucous membrane has a brownish tinge, and its contents, as well as those of the intestinal canal, consists of a coffee-colored fluid.

The results of the bacteriologic examination is very interesting. It is rarely that the blood and the viscera of dogs which have died from the intoxication, especially if they have lived for several days, are found sterile. Almost always we obtained very abundant cultures of the streptococcus, more rarely of the colon bacillus and the staphylococcus aureus. These results are quite similar to those which we have found to be conspicuous in man.

In the following chapter we shall take up the mechanism of these secondary infections, which are so interesting from a clinical and also from a bacteriologic point of view.

Intoxication in the Cat, the Goat, the Ass, and the Horse.

The cat is a very resistant to the action of the virus, and also to that of the toxin icteroides. We have injected both the virus and the toxin in very formidable doses, without obtaining any other result than a diminution in weight more or less accentuated, following the inflammatory process at the site of inoculation.

This animal may perhaps be considered the most refractory among those that I have had occasion to experiment upon up to this time. With regard to the goat, the ass, and the horse, my researches have not been

carried on in a systematic manner, but I have noted the action of the poison amaril in them during the many attempts at inoculation that I practiced for a long time, and which were many times followed by the death of these animals.

The goat is very sensitive to the virus and also to the toxin amaril. We have found that small doses of the virus are sufficient to kill a large, full-grown goat. But with regard to the toxin, it is impossible to establish a fixed lethal dose.

I have sometimes seen small goats tolerating very large doses (15-20 c. c.) of toxin for several successive days, without presenting other symptoms than a transient emaciation, while other mature goats in an excellent condition have succumbed after the subcutaneous injection of small fractional doses.

Note, for example, the result of one of these intoxications in the goat, followed by death:

Full-grown goat, No. 2.; kilograms 20.

On the 2nd and the 5th of August, 1896, she was inoculated subcutaneously with one c.c. of a filtered culture. She presented locally a slight swelling with evident pain in that region: on the 8th of August she received another dose 2 c.c.; on the 11th of the same month, 3 c.c.; on the 13th, and the 17th, 5 c.c.; finally on the 19th and the 21st, 11 c.c.; she therefore received 37 c.c. of the filtered culture during the 18 days.

The day of the last injection she became sick and died during the night. The result of the autopsy was as follows: The thorax contained 500 c.c. of serous exudate, transparent, without leucocytes, of a wine color, in both pleural cavities: this exudate contained 2.70 per cent. of urea, that is to say, the same amount that is found in the blood in nephritic animals. When it was added in the proportion of 1 to 5 to a fresh bouillon-culture of the bacillus icteroides, there was immobilization and agglutination of all the bacilli in 1 hr., 30 min.

The liver presented, by the microscope, the appearance of a nutmeg; the preparations, made by laceration of the tissues in osmic acid, showed a complete fatty degeneration of the hepatic cells. The spleen was normal in size, but less compact and resistant than usual. The kidneys showed an inflammatory process so intense, that on the cut surface the cortical portion was distinguished from the medullary, only by its wine-color; the fresh preparations in osmic acid revealed also the presence of drops of fat in the kidney. Sections of this tissue fixed in Flemming's fluid showed, as the fundamental lesion, and very diffuse, a necrosis of the epithelium of the urinary tubules, on account of which the epithelium appeared cloudy, granular, and globular, and these cells were either without nuclei or contained nuclei incapable of taking up the stain. The bladder, firmly contracted, presented several ecchymotic spots, and contained about 10 c.c. of a reddish colored fluid. A microscopical examination of this fluid demonstrated the entire absence of red blood cells, but the examination

with Fleischl's hemometer gave an amount of hemoglobin equal to 30 per cent.

The intestines were congested, with hyperemia and ecchymoses.

The weight of the cadaver was 15.371 kilograms; the loss being 4.630 kilograms in 18 days.

The bacteriologic research proved negative.

Upon the whole, therefore, we may conclude that with the exception of vomiting, the toxin icteroides produced exactly the same symptoms in the goat, that we have detected in dogs and man.

But the most remarkable feature in the goat is the tendency to hematolysis and the extreme sensitiveness of the kidneys to this toxin. The death of the animal is due in great part to the profound lesions of the kidneys; the considerable amount of urea which we found in the exudates of the organs is evidence in favor of a uremic intoxication.

I have exerimented upon only a single ass. The one in question was a vigorous female which secreted great quantities of milk.

On December 26th, 1896, we inoculated her subcutaneously with 5 c.c. of the filtered toxin. The following day a large, painful tumefaction appeared at the point of injection. After two days, some drops of blood began to flow from the teats of the swollen glands, and the animal appeared dejected and lost her appetite.

The rectal temperature ranged from 38° 2′–38° 6′ to 40° C. on Jan. 2nd, 1897, the temperature having become normal, the ass was inoculated again with 10 c.c. of toxin. The tumefaction returned at the point of injection, and the milk began to disappear from the glands. On the 5th of the same month, an inoculation of 15 c.c. of filtered culture was made, and on the 8th, a subcutaneous injection of 5 c.c. of a bouillon-culture sterilized with ether. The milk then almost entirely disappeared, and the tumefaction became localized to the point of injection, and manifested itself with a relative intensity.

On the 12th of January, having now received 30 c.c. of a filtered culture and 5 c.c. of a culture sterilized with ether, the beast was again inoculated by injecting into the veins 10 c.c. of a bouillon-culture sterilized with ether.

Immediately after this injection, the animal was attacked with dyspnea which disappeared after a short time; but, during the night, it foaled a small embryo, about 8 centimeters long, and died at the break of day.

The result of the autopsy, made early in the morning, was as follows: The thorax, contained a sero-sanguinolent exudate in both pleural cavities. There was slight fatty degeneration of the liver; by a microscopic examination of the tissues in osmic acid, the hepatic cells are found filled with fatty granulations; the kidneys were of normal volume, but flabby and friable; they presented very grave signs of a diffuse acute nephritis; the bladder was contracted and contained a small quantity of urine of a reddish color, which under the microscope showed the presence of enormous quan-

tities of leucocytes, of red corpuscles, and of epithelial cells; on heating the urine it coagulated en bloc, as if it were pure albumen. The peritoneal cavity contained an abundant amount of limpid serum of a rose color. The mucous membranes of the stomach and of the intestines were considerably congested in places.

The chemical analysis of the blood gave 1.29 percent. of urea. The bacteriologic result was as follows:

The blood, the spleen, and the kidneys were sterile, but the liver contained a certain amount of the colon bacillus and the staphylococcus aureus, and the urine contained a very great quantity of the staphylococcus albus and aureus, mixed with other species which were not determined.

Consequently, the usual pathogenic mechanism is renewed in the ass; inflammatory processes and degeneration of the liver and the kidneys; lesions of the mucous membranes; hemorrhages into the parenchyma, the serous cavities, the mucous membranes, the glandular organs (mammary); and, at last, the final picture of uremic intoxication, and the invasion of microbes into the organism.

We pass finally to the effects of the toxin upon the horse.

We shall be very brief on this point, for the reason that, these animals being destined for the production of a specific serum, we shall take up elsewhere the effects produced in them by the inoculations of the toxin icteroides.

The horse is extremely sensitive, even to the injection of small quantities of the toxin.

The subcutaneous injection of small doses of a filtered culture (5-10 c. c.), always produces a severe local swelling, followed by fever, which lasts 12 24 hours. This swelling is extremely painful and disappears very slowly.

When the quantity injected is more abundant, or if instead of the filtered culture, we inject cultures sterilized with ether, which are much more active, the swelling produced becomes very voluminous and is constantly followed by the appearance of large, subcutaneous edemas which extend into the surrounding parts, reach the limbs, and terminate occasionally by impeding the movements for several days.

Almost always, on the surface of the abnormally distended skin, sanguinolent, suppurating ulcerations appear, which are healed with difficulty. These edemas, as well as the tumefactions which are produced at the point of injection, do not disappear for several days, during which time the animals very often have almost continual fever.

The intravenous injections are better tolerated, but they are of grave inconvenience. After each injection, the animal regularly presents a severe paroxysm of dyspnea, and is attacked with a general tremor that obliges him to lie down. The fever comes on, and the animal remains a little drooping for several hours, but, on the following day, the tempera-

ture returns to the norm.

During my experience, however, I have lost several horses, belonging apparently to the creole race, whose resistance to toxins in general, and to the toxins diphtheria and amarilligene in particular, is much less than that of the mixed breeds.

The autopsies of these creole horses, which before death had some unusual intestinal hemorrhages, showed a large swollen spleen, slight degeneration of the kidneys, nephritis, albuminuria, and some signs of enteritis. I have not believed it necessary to dwell further upon these researches, which give nothing more than the reproduction, more or less marked, of lesions that we have already studied with the virus. That which appeals to the attention most of all, is the different manner in which the poison icteroides acts according as it is injected under the skin or directly into the blood..

We see repeated in man, in a manner even more striking, these extraordinary local phenomena, seen especially in the dog and the horse, to which we have called your attention.

The toxin amaril is therefore a remarkably cellular poison, comparable only, in some respects, to the toxin of diptheria.

By contact with the elements of the animal organism, especially in the higher species, it produces an effect like that of the toxin of diphtheria, a violent irritation, followed by retrogressive processes which terminate always in necrosis and fatty degeneration of the protoplasm.

This explains the origin of the diffuse steatosis which characterizes in such a constant manner the yellow fever of man and the superior animals. It also explains why the subcutaneous injection of the poison usually induces much more intense phenomena than those which are produced by the injection of the same amount into the veins.

It is probable that, on account of the grave circulatory and nutritive disorders which it produces in the tissues with which it comes in contact, the intensely irritant properties of this poison are an indirect obstacle to its rapid absorption by the organism.

It is also probable that a great part of the poison is exhausted in the necrotic process that it produces in the first paths of diffusion.

We have established, therefore, that the most conspicuous phenomena of yellow fever are the black vomit and the intestinal hemorrhages, which are not by any means due to the action of the specific virus which exists in the intestinal cavity, but are produced by virtue of the energetic inflammatory, degenerative, hemorrhagic, and emetic, properties of the specific poison circulaiing in the blood.

The disease in question is a true hemorrhagic gastroenteritis. The degenerative properties reach the maximum of their specific action in the hepatic cells. With the liver, the kidney is early attacked in the yellow fever of all the superior animals and above all in man. In fact, albuminuria is one of the earliest signs of the amaril poisoning; and parenchyma-

tous nephritis, revealed by an anuria which almost infallibly announces the fatal termination of the disease, indicates the beginning of that uremic intoxication which we have produced in as great measure, with small doses of the toxin.

It is indeed very probable that the immediate cause of death, in the majority of cases of yellow fever, is precisely the renal insufficiency, which favors the retention in the blood of the extractive substances, normally eliminated in the urine, and which are, as we have seen, very injurious to the organism.

The quantity of urea, which is much greater than that which we find in normal blood, is again a sign of intoxication.

As the symptomatology of uremic intoxication presents much analogy to the clinical picture of yellow fever (cephalalgia, delirium, dyspnea, vomiting, stomatitis, diarrhea, etc.) and, on the other hand, the kidney is one of the first organs invariably attacked by the icteroid toxin, it is very difficult to establish a priori, which are, in the secondary period of the disease, the symptoms due to the renal insufficiency and which are those due to the poison amaril. It is very probable, however, that a great part of the symptomatology of the amaril poison is produced rather by the renal insufficiency than by the specific poison.

In fact, we have seen that in the small animals, in which I have never found a renal insufficiency, the experimental disease develops as in man, but, without producing a single one of the multiple clinical symptoms which accompany the yellow fever in the superior animals, where the lesion of the kidneys constitutes such a prominent phenomenon.

Mixed Infection in Yellow Fever.

We have seen that, in almost all of the cases of yellow fever, the invasion of certain species of microbes is so rapid and so marked, during life, that we have questioned regarding the behavior of the bacillus icteroides in the presence of these new invaders, which multiply so freely in its original domain.

As a result of the whole of these observations and these researches, contained in my two memoirs, we have established three different bacteriologic types of yellow fever in man.

The first type is that which has been reproduced exactly and constantly in our experiments in the laboratory, especially in guinea-pigs, abbits, and sometimes in monkeys.

The second type is represented by those cases in which the cadaver presents the appearance of a pure septicemia or of a general mixed infection, with absence or very rarely the presence, of the specific bacillus, as if the secondary infection had preceded the period in which it manifested its multiplication and its diffusion in the organism.

This conception would in reality accord with the bacteriologic results

of the third type, in which the organism is always sterile, and death may be considered due to a renal insufficiency.

But we have questioned whether the invasion of the microbes, which are foreign bodies in the blood, and the formation of the specific toxic substances, are not of themselves alone sufficient to cause the total or partial disappearance of the bacillus icteroides by weakening its vegetative power or by killing it directly.

Indeed, we have observed more than once the bacillus icteroides isolated with difficulty, especially when it is found in small numbers and mixed with other species of microbes, proving the great difficulty with which it develops in ordinary peptonized bouillon.

It has been interesting to study the mutual relations existing between this microbe and the microbes of the secondary infection in man and in the superior animals—colon bacillus, streptococcus, staphylococcus aureus, and proteus vulgaris.

We have discovered two forms of antagonism existing between the different species of microbes, a vital antagonism, which is manifest when a species cannot live or thrive in a medium in which another lives and thrives, and a chemic antagonism, which is manifest when a species cannot live and thrive in a medium in which another has lived and thrived.

These two forms of the manifestations of microbic antagonism are not due to the same cause, for a germ that cannot live or prosper in a medium in which other microbes are living, may thrive very well in their sterilized cultures.

We shall see that the experiments in vitro made this distinction necessary. I have proceeded to study chemic antagonism in the following manner: After the cultures of the species to be experimented with have grown for three days in the incubator, on agar solidified obliquely, I have liquified the nutritive medium again, sterilizing it at the same time, and have resolidified it. I then cultivated the different species upon this new medium and made a complete series of combinations.

A resume of the result of these researches may be found in the following table. The sign plus indicates the intensity of development in each culture tested:

Agar Cultures of the following Microbes sterilized and resolidified:	Result of Inoculation with:			
	Staphylococcus Aureus	Bacillus Icteroides	Colon Bacillus	Proteus Vulgaris
Staphylococcus Aureus	+ +	—	+	+ +
Bacillus Icteroides	+ + +	+	+	+ +
Colon Bacillus . .	+ +	—	+	+ +
Proteus Vulgaris .	+	—	Traces	+ +

We see that the soluble products of the bacillus icteroides restrain the growth of all the other microbes the least, while those of the proteus vulgaris are the most toxic and the most injurious. This last species and the staphylococcus aureus develop very well on a medium in which other microbes have grown, and especially on that in which the bacillus icteroides has first grown. The latter, on the contrary, is incapable of living in a medium containing the soluble products of the staphylococcus aureus, the colon bacillus, and the proteus.

It follows that of all the different microbes which we have examined, the bacillus icteroides has been found to be the most inferior to the biologic condition of resistance.

It is therefore possible that one of the causes which makes it difficult to isolate this specific microbe from cadavers of individuals dead of yellow fever is precisely the energetic bactericidal action of the toxic products elaborated in the organism by the other microbes, the agents of the secondary infection.

Indeed, many of the patients of yellow fever really succumb suddenly to a septicemia from the streptococcus, from the colon bacillus, etc., the rapid multiplication of these microbes overspreading the organism with a quantity of toxic products, sufficient for killing or attenuating the specific microbes situated in some viscera, and which have not arrived at the period of active multiplication.

In regard to the other form of antagonism, the vital, it is easy to make it evident, either by cultivating at the same time two or more species of microbes on the same nutritive medium, or by inoculating them crosswise upon a plate of agar previously solidified.

The first is not very easy of application when two microbes very different from each other morphologically are used, as for example, the streptococcus and the bacillus icteroides.

With respect to the action of these two microbes, my researches have given the following results: 1. On tubes of agar sterilized and resolidified, on which the bacillus icteroides had been grown for seven days, the streptococcus developed much more rapidly and abundantly than on new tubes of agar inoculated for a control; 2. When cultivated together in the same tube of lactose bouillon, the streptococcus grew in very great abundance and formed remarkable chains, much longer than those observed in the tubes of lactose bouillon inoculated for a control, as before; 3. On inoculating the bacillus icteroides into the old cultures of streptococcus (4, 6, 13 days), in lactose bouillon non-sterilized, and in which the chains are completely precipitated, leaving the fluid transparent, the bacillus did not develop, and the fluid remained transparent; 4. On inoculating the streptococcus into old cultures (11 days), of lactose bouillon non-sterilized, in which the bacillus icteroides had grown, the streptococcus developed rapidly and abundantly, forming filaments of extraordinary length; 5. On growing the bacillus icteroides and the strepto-

coccus together in a simple peptonized bouillon in which the latter grew much more difficultly than in the sugar bouillon, the bacillus icteroides developed in very great abundance, taking precedence over the streptococcus.

We have deduced as conclusions: 1. That when the conditions are equal, the streptococcus always takes precedence over the bacillus icteroides; 2. That the streptococcus grows well in a medium in which the bacillus icteroides has grown, while the contrary is the case with the latter.

But a vital antagonism more marked even than that shown with the streptococcus, is that of the staphylococcus aureus with the bacillus icteroides. For a clear demonstration of this antagonism, it is sufficient to make two inoculations in the form of a cross, en striæ, on a plate of agar, with a platinum needle dipped successively into a bouillon-culture of the two microbes.

Whatever the manner in which the inoculation has been effected, the staphylococcus aureus propagates itself and systematically invades the line of inoculation of the bacillus icteroides, so that often in 24 hours, the plate of agar, instead of presenting two perpendicular striæ, one yellow and the other an iridescent gray, presents one cross entirely yellow.

I have tried making the inoculations crosswise, one 24 hours after the other or making the inoculations in an inverse order, but I have always obtained the same results: when the staphylococcus aureus reaches the point of union with the culture of the bacillus icteroides, it invades it and overspreads it with its luxuriant growth; the bacillus icteroides, on the contrary, in proportion as its line of growth approaches that of the staphylococcus, presents a development more and more limited and meagre.

There exists, therefore, between the bacillus icteroides and the staphylococcus aureus a vital antagonism very pronounced, to the complete advantage of the latter.

With the staphylococcus and the streptococcus. I have usually seen that the colon bacillus shows an antagonism against the bacillus icteroides.

It is superfluous to recall that the colon bacillus presents no antagonism with the staphylococcus aureus: the two species often develop parallel to each other, promiscuously and independently, as well in bouillon-cultures as in inoculations crosswise on the surface of plates of agar.

But between the bacillus icteroides and the colon bacillus a manifest antagonism is revealed, although less than that already noted between the staphylococcus and the bacillus icteroides. By the inoculations crosswise on plates of agar, we always obtain the colon bacillus on three arms of the cross and the bacillus icteroides upon a single arm. We know perfectly, as well without recourse to growth in lactose bouillon (which always decides any doubt whatever,) the arms of the colon bacillus

growth, because they are much larger, more elevated, and more abundant than those occupied by the bacillus icteroides.

The results obtained explain sufficiently the negative results following the research for the bacillus icteroides in the cadaver, but they do not show why the secondary invasions are constant in yellow fever. That is a point upon which my experiments have not given any light.

We have seen, however, that in guinea-pigs and rabbits, whatever the duration of the disease, the bacillus exists in a state of absolute purity in the cadaver. In the dog, the goat, and the ass, on the contrary, we frequently find the specific bacteria associated with the streptococcus, with the colon bacillus or with the staphylococcus. In one of my experiments on man, the injection of the poison amaril was capable of inducing the presence of the colon bacillus in the kidneys.

The only fundamental distinction between the anatomic lesions in these different cases is the hepatic lesion. In the hepatic cells of the goat, the dog, the ass, and of man, the poison amaril produces a profound degeneration, while in the small rodents this hepatic action is scarcely ever exercised. It is perhaps for this reason, that in the first animals mentioned, spontaneous secondary infection is frequent, and for this cause, the course of the disease is subordinated to the other factors, while in the second, the secondary infection is not a point, in fact, and the disease accomplishes regularly its cycle of evolution. The specific lesion of the hepatic cells serves then as the principal cause of the constant, secondary, microbic invasion, in a disease characterized by profound degenerative processes of the principal organ of defense, against the invasion of the intestinal microbes.

The Yellow Fever on Board of Ships.

The maritime propagation of yellow fever is a well-established fact. The manner in which this disease conducts itself on board of ships differs from that of cholera, in that the latter, introduced on board, breaks out and rapidly attacks all of those that it ought, as one says, to attack. But this done, the cholera vibrions do not seem to meet, in the ordinary conditions of nautical life, with a field which is very favorable for their existence, and if a considerable degree of disinfection is practised, the disease is extinguished.

On the contrary, the yellow fever, if once installed on ship board, maintains itself for a long time, especially in the hold, the magazines, the merchandise and all other close small places. There is indeed a current notion that old and worn out ships are more easily infected, and are therefore improper for service in a country where yellow fever is endemic. The writers of naval hygiene consider as a type of a yellow fever vessel the ships which are insufficiently ventilated, provided with too small apertures, allowing of stagnation of the vitiated air above and of the fetid moisture below.

Humidity, heat, darkness, and want of air, seem to be the proper coefficients for the preservation of the bacillus icteroides. But they have no specific action upon this microbe, and it must be sought for elsewhere.

An observation, which I have often noted, has led me to a means of explanation. I have seen in several tests, that after an abundant inoculation with the bacillus icteroides, gelatine remains sterile, while agar inoculated at the same time, shows a growth. But if a mould gained entrance to the gelatine at the time of inoculation and developed its mycelium, a crown of small punctiform colonies of the bacillus icteroides immediately appeared.

In the proportion that the mould increases, these colonies become more and more numerous, and the zone which they occupy extends rapidly around the growth formed by the mould. After some days the plates present a very curious aspect. Around each mould, the colonies of the bacillus icteroides form a species of constellation, being much more numerous as they draw nearer to the place occupied by the mould. This ray of influence is more or less extended according to the nature of the space which it occupies, but it is always perfectly regular.

This favorable property of the mould for the bacillus icteroides has also been demonstrated experimentally, by directly inoculating the spores of some species of mould into the middle of a plate of gelatine, which had been previously inoculated with the bacillus icteroides, but, after remaining for a long time, had been found sterile. I have made this experiment with six different specimens of mould, which I have accidentally isolated in the laboratory, and all have proved themselves capable of favoring the revival and the multiplication of the bacillus icteroides.

The strange phenomenon of parasitism is perhaps the principal cause of the easy acclimatization of the yellow fever on board ships. The legendary moist heat and lack of ventilation, provide at that time the conditions directly favorable for the development of the moulds, and indirectly favorable for the vitality of the bacillus icteroides.

This phenomenon of commensalism, analogous to that which Metchnikoff pointed out a long time ago in the cholera vibrion, explains also many other practical well known observations, which we find in the epidemiologic history of yellow fever, and on which I believe it to be useless to dwell longer.

Resistance to the Bacillus Icteroides to Natural Physico-Chemical Agents.

For the purpose of completing our knowledge of the biology of a microbe against which we ought to establish henceforth, on a scientific basis, an active means of defense in all the localities infested by the yellow fever, I have thought it useful to add some researches relative to its resistance to heat, to dessication, to light, and to the water of the ocean. A great part of these researches have been executed by my excellent preparateur, M. H. Puppo.

(A.) Resistance of the bacillus icteroides to moist heat. The following method is that which is employed in all laboratories; it consists of heating small tubes of thin glass containing bouillon-cultures of the bacillus icteroides over a water-bath.

This result shows that the specific agent of yellow fever, like that of diptheria, of glanders, of typhus, of cholera, etc., has little resistance to the action of moist heat. Indeed, a temperature of a relatively slight elevation, to 60° C., destroyed the microbe in a few moments, and that of 65° C. killed it immediately.

(B.) Resistance of the bacillus to dry heat. This series of experiments has been conducted by means of threads of silk soaked in bouillon-cultures, then dried in an incubator at 87° C., and finally submitted to dry heat in an ordinary hot air sterilizer. The removal of each thread of silk from the incubator, as the temperature slowly increased each 5° C. was accomplished so as not to arrest or diminish the temperature of the incubator.

The results of these experiments, confirmed by several tests, have demonstrated that the bacillus icteroides, exposed to dry heat, is destroyed at a temperature ranging between 120° and 125° C. It required 1 hour and 10 minutes to kill it at a temperature of 100°.

(C.) Resistance to the bacillus icteroides to desiccation. These researches are of great interest epidemiologically. In the yellow fever countries, we often note a case of contagion occurring unexpectedly among individuals who have come to live in a center where several months before a patient had died of typhus icteroides.

These experiments have been made usually with threads of silk exposed in a sterilized Petri plate, at the temperature of the incubator and also of that of the surrounding air. The cultures on threads which were dried at a temperature of 37.5° C., began to be sterile in 35-37 hours. After 40 hours, eight threads in twenty had become sterile. After 50 hours all of the threads were perfectly sterile. The growths on threads, dried in the incubator at 37° C. for 24 hours, and then exposed to a variable external temperature, have always remained positive, even after 164 days.

This authorizes us to believe that the spontaneous desiccation of the bacillus icteroides at the ordinary temperature, leaves a great degree of vitality.

(D.) Resistance of the bacillus icteroides to the action of direct sunlight. The action of direct sunlight on the bacillus icteroides grown in both a solid and a fluid medium, has always given inconstant results, although in all the cases, there has been a more or less rapid sterilization of the cultures. The inconstancy of these results is in keeping with the inevitable inconstancy of the conditions of the experiment. I can say, however, that on silk threads, dried previously at 37° C., and then exposed to the sun's rays, death followed in summer in a little more than

seven hours, the temperature oscillating in the neighborhood of 28° C.

(E.) Resistance of the bacillus icteroides in the water of the ocean. When we take for this study the natural water of the ocean, with its population of various microbes, the conditions of the experiment are so entirely wrong, and the conclusions drawn are so inaccurate, that I have preferred to test the action of the bacillus icteroides in sea-water sterilized by heat of filtered through a Chamberland filter, and on the ground of its nutritive value alone.

The waters studied were that of the Rio de la Plata, taken in the port of Montivideo, and that of the ocean, taken in the port of Rio Janeiro, The difference in the chemical composition of these two waters is, as we conclude, considerable. The water of the Rio de la Plata, near Montevideo, is a mixture of fresh and salt water. While the pure sea-water at Rio Janeiro contains 29.25 per cent. of NaCl, that of the Rio de la Plata, at the time of the beginning of my experiment, contained 5.67 per cent. The water at the port of Montevideo is not very rich in microbes, although it receives the sewage of the whole city: it contains a minimum of 200 and a maximum of 720 per c.c.

In the sterilized water of the Rio Janeiro the bacillus icteroides still lived at the end of 90 days, when I was obliged to discontinue my research. In this same water, filtered and divided into three parts, I obtained the following results: No. 1 became sterile at the end of 37 days; No. 2 at the end of 78 days, and No. 3 at the end of 71 days.

In the water of the port of Rio, filtered and non-filtered, the bacillus icteroides lives for a long time. I have constantly found it at the end of the 50th day.

This remarkable vitality of the bacillus icteroides in sea-water, considering the latter merely as an absolutely passive medium, ought to be taken into serious consideration in all the questions of public hygiene, where may enter, under any claim whatever, the water of the ocean.

General Resume on the Morbid Process and on the Epidemology of Yellow Fever.

The results of this second memoir complete and confirm, in a definite manner, all the statements made in the first, apropos of the etiology and the pathogenesis of the yellow fever. The value of these results is based principally on the following points:

By the inoculation of the toxic products of the bacillus icteroides into different animals we obtained the same symptoms and the same anatomic lesions that we have previously described as due to living microbes. This proves again that the picture of the disease in man as well as in animals, is due to a process eminently toxic, which is induced by the active substance generated by the bacillus icteroides, and to which we have given the generic name of poison amaril.

The poison amaril has an action less marked and less characteristic in some animals which, in the presence of the living virus, seem also to give a less specific reaction. Of this class are the small rodents.

But when we inoculate into the organism of the animal reacting par excellence, the dog, we induce all of the symptoms and all of the anatomic lesions which we have already described after using the virus, and which are found in human infection.

The amaril intoxication of dogs produced not only the symptomatology and the specific lesions of yellow fever, but also renal insufficiency and favored the appearance of characteristic secondary infections on the part of well-known microbic species (streptococcus, staphylococcus, colon bacillus), completing thus, with the chemic and bacteriologic results, the exact reproduction of all that we have observed in the yellow fever in man.

The study of the amaril intoxication in the goat has placed on evidence, in a manner truly surprising, the energetic hemolytic power of the icteroides poison, giving to us, finally, a plausible explanation of those bluish, slate-colored or reddish-brown suffusions which we find so frequently in the cellular subcutaneous tissues of patients and of cadavers infected with yellow fever.

It is very probable, especially in the cases where we failed to obtain the reaction of biliary pigments in the blood and urine, that the characteristic yellow pigmentation of the skin, which appears after the disappearance of these suffusions, and very often several hours after death, is simply due to a subsequent process of oxidation of the coloring substance of the blood remaining in the tissues. In these cases, it is a question of hematogenic icterus, or rather of a hemoglobinemia, like that which we observe very generally in cases of extreme destruction of the blood corpuscles, accompanied by hepatic insufficiency, (poisoning by carbonic oxide, arsenious hydroxide, acetylphenylhydrazin, etc.)

The consecutive nephritis and the uremic intoxication in the icteroides intoxication in the goat only confirm the specific action of this poison on the renal parenchyma, which is, next to the hepatic parenchyma, the tissue that is always found to be the most seriously affected.

The extreme sensitiveness of the ass to the specific toxin has proved of assistance to us by the manifestation of three important phenomena; two of them, hematuria and the secondary infections, are frequent and sufficiently well-known; but the other, mastorrhagia, had not been described by any author, and it undoubtedly represents the more extreme manifestation of the hemorrhagic properties of amarilism.

With regard to our experiments on horses, we can say that, for the time, they have not served to demonstrate the extreme sensitiveness of these animals to the toxin of the bacillus icteroides, especially when it is inoculated subcutaneously.

All of these symptomatic phenomena, all of the alterations in funct-

ion, all of the anatomic lesions of the yellow fever, are but the consequence of an action ,highly steatogenic, emetic, and hemolytic, of the toxic substances generated by the bacillus icteroides.

It is perhaps by these general symptoms, the characteristic ataxo-adynamic manifestations, the tendency to hemorrhages, the icterus, etc., that the yellow fever has been likewise compared to a poisoning by the venom of certain serpents.

We cannot now consider, as we have done heretofore, the digestive organs as the central seat and the gate of entrance of the specific bacillus. But then it becomes difficult to learn how this bacillus is able to invade the organism.

In the yellow fever countries, we have not, however, gathered evidence sufficiently demonstrative for establishing the transmission by water. On the contrary, there exists an imposing series of facts which bear witness decidedly in favor of the atmospheric transmission.

The single example always cited by writers, the decrease of yellow fever at Vera Cruz since the city has been provided with a good drinking water, can only have an entirely relative value,like all affirmations of this kind.

The tendency to attribute established sanitary improvement in a city to the achievement of a single hygienic measure, is too exclusive; for it is almost always a question of a number of different hygienic measures, which necessarily must have preceded or accompanied it.

Elsewhere, the remarkable resistance against desiccation in air and residence in water, possessed by the bacillus icteroides, authorized us to admit of the diffusion of the virus amaril by air as well as by water.

Again, the experiment upon animals demonstrated the possibility of contagion by the respiratory tract.

From the point of view of the mechanism of the contagion as conveyed by water, it is a fact henceforth beyond doubt, that the epithelium of the digestive tract, when it is intact, does not allow of the passage of any species of pathogenic germ

But one must remember that, in a yellow fever country, the lighter diseases of the digestive functions(from abuse of beverages, alcohol, and ices, fruits, etc.,)especially among the new arrivals, constitute, as general and depressing causes, sufficient means for immediately inducing the entrance of the terrible disease upon the scene.

Again, we must not forget that new arrivals in tropical countries are subject to a light catarrhal inflammation of the bile ducts, which, added to the inevitable superactivity of the liver which accompanies it, should also be able to facilitate the development of the bacillus icteroides, no matter how it arrives in the intestine, in any point whatever of the hepatic organ. Now that we know so well the formidable effects of the toxin, we should easily comprehend how the virus ought to find, without too much trouble, the means of resistance and of propagation in whatever

organ it succeeds in penetrating, with or without other co-operating causes.

In fact nothing is easier than penetration of the bacillus icteroides into the intestine at any time when it already makes one of the microbic flora of a yellow fever locality.

The extreme tendency to lesions of the hepatic organ should represent, therefore, in warm countries, not only one of the conditions that very easily disposes to amarilism, but when once this is established, it becomes the principal cause of the secondary infections, which give, at times, a strangely confusing aspect to the bacteriologic results of the yellow fever, and which contribute in a considerable manner to augment the appalling mortality of this disease.

But there exists another curious biologic phenomenon which acquires an immense value in the epidemiology of yellow fever. It is the question of the strange symbiosis that we have pointed out as existing between the bacillus icteroides and the mould.

These last are revealed as the natural protectors of the s ecific agent of yellow fever; for it is only through their intervention that this organism is able to preserve force for living, and for multiplying itself, in conditions where the unfitness of the nutritive medium or the unfavorable action of dysgenetic temperatures must render its existence almost impossible. The intervention of this factor, so insignificant in appearance, constitutes perhaps, the principal cause of the acclimatization of yellow fever in certain localities.

We know, indeed, that one of the conditions considered as indispensable to the development of yellow fever, the humidity, represents conjointly with the heat, the element most favorable to the development of the moulds. We attribute the insalubrity of Rio Janeiro to its lack of ventilation, and to the excessive hygrometric state of the atmosphere.

During the great epidemic of yellow fever in 1872 at Montevideo, with an inexplicable preference, the persons attacked, were those who lived in the eastern houses towards the north of the city.

Now the houses as well as the sides of the streets toward the north, were noted in Montevideo for their very exceptional humidity.

It is therefore probable that this factor (moisture,)either on board ships, or upon the coast and in the interior, represents, the principal co-efficient of the biologic phenemenon, or rather a baneful meteorologic influence, whose role proves itself identical in the etiology of almost all of the epidemic disease.

On the other side, the remarkable resistance presented by the bacillus icteroides against the principal factor of the natural disinfection, that is desiccation, and its great longevity in the water of the ocean, explains sufficiently the easy acclimatization of typhus icteroides and its obstinate persistance in the infected maritime localities.

REVIEW OF MEDICINE.

MEDICINE.

Digestion and Nutrition After Complete Removal of the Stomach. (*Corresp. Bl. f. Schweitz. Aerzte. Nov. 23, 1897.*)

Dr. Carl Schlatter's successful removal of the human stomach has recently been widely heralded in this country, and the comments upon it in many quarters proceeds upon the assumption that digestion and nutrition without the aid of the stomach have been hitherto considered impossible. But this is not so. The same operation has been repeatedly done on animals which have lived and gained weight after being deprived of their stomachs. Specialists in gastro-enteric diseases are familiar also with the fact that gastric digestion is much less important than that effected by the pancreatic and intestinal juices in the small intestines. They frequently see patients restored to fair, and sometimes to excellent, health, in whom there is absolutely no stomach digestion on account of total atrophy of the gastric glands. Dr. Schlatter presented the patient above referred to at a recent meeting of the Swiss Aerztliche Centralverein and described the method of feeding that was followed after the operation. The tumor, which incapacitated the stomach, is said to have been cancerous. Three weeks after the operation the patient was able to take solid food, and by the end of two months had gained 4,400 grams in weight. In order to substitute the function of the stomach as a reservoir, small amounts of food were given at frequent intervals. The daily food allowed at the time of the report included on the average 1 litre of milk, 2 eggs, 100 to 150 grams of grits, 200 grams of meat, 200 grams of oat meal or barley gruel, 1 glass of tea, and 2 rolls with 15 grams of butter. Chemic and microscopic examinations of the feces showed that the albuminoids were well elaborated. The comments of the reporter upon the completeness with which the ferments in the small intestine performed the work usually done by the gastric juice need not be repeated, since the physiologist of today is quite familiar with such phenomena.

Two novel points, however, were brought out in the discussion of this case: one, that certain easily recognized food substances passed through the stomachless alimentary tract in twenty-four hours, which is much less than the usual time; and the other, that vomiting had taken place in the woman without a stomach. This letter fact disproves most of the old theories as to the mechanism of vomiting, and opens up the field anew for speculation and theorizing.

BOARDMAN REED.

A Case of Raynaud's Disease' (*British Medical Journal, September, 1897.*) By Albert Mouillot, M. D.

The patient was a girl of 15 years. Her health had always been fairly good, but she was a constant sufferer from cold hands and feet. This coldness of the extremities became worse and the left hand began to swell, to grow painful and look quite black. About five months before she came under observation the hand became extremely tender, so much so that she could not have her nails cut and she was unable to use the hand for any purpose. The only evidence of impaired general health was the cessation of menstruation.

When first examined the condition was as follows: The extremities were of a bluish black color when cold and of a deep red when warm. The left hand was greatly swollen, and the fingers were kept fully extended. Any attempt at flexion caused extreme pain. The coldness and discoloration extended half way up the left forearm. The nails were snow-white in color and very long, owing to the pain induced by attempting to trim them. The patient said that sometimes her hands and feet grew hot, and when they did so the pain was much worse. There was no albuminuria or any history of hemoglobinuria.

In order to keep the patient in an even temperature and to improve the general nutrition, the author placed her on the Weir-Mitchell rest-cure. The improvement was uninterrupted. The manipulations in the beginning were very gentle, but were gradually increased to the end of the seven weeks' period, during which the treatment was applied. At this time she was practically well.

S. McC. Hamill.

On the Duration of the Period of Infectiousness in Scarlet Fever. (*British Medical Journal, Sept. 25, 1897.*) By James T. Neech, L. R. C. P., Edin.

In order to ascertain the usual length of period of hospital isolation in scarlet fever, the author sent inquiries to a number of fever hospitals throughout England. He asked the minimum, the maximum and average period of isolation in each of the hospitals during the two previous years, and also the number of return cases which occurred within one week of the patient's discharge from the hospital. The replies showed that the minimum period varied between four and eight weeks, the maximum, in some cases, extending to six months. The average period varied between thirty-nine and sixty-five days. He was able to obtain pretty accurate records regarding the return cases in 15,000 patients. Through these he found that where the average period of isolation was forty-nine days and under, the return cases averaged 1.86 per cent. Where the average varied between fifty and fifty-six days, the average of return cases was 1.12 per cent., and where isolation extended to between fifty-seven and sixty-five days, the average

was 1 per cent. Through this he concludes that the average period of retention in hospitals bears some relation to the number of return cases of the disease. He refers to the possibility of infection occurring in these return cases through infected articles belonging to the patients, but with the present methods of disinfection, he thinks this does not play a very important role. He believes that discharged patients, in a certain percentage of cases, are responsible for the infection of the return cases. It is possible to account for this in several ways. Some authorities believe that patients, by breathing the actively infected air of a hospital during convalescence, take up infected matter into the cavities of the nose and lungs, and in this manner convey the poison to their homes. Neech considers this a possible, but not a probable source, feeling, that if it were true, the percentage of return cases would be much larger than it is. Aside from this, the more prolonged the retention in the hospital, the smaller the percentage of return cases; a fact which would not hold if this were true.

Neech believes that the lymphatic glands store up infected material, thus giving rise to the glandular enlargement. As the irritation of the poison ceases and the enlargement is absorbed, the virus again passes into the blood stream, and is eliminated during recovery by the different emunctory organs. Therefore, when a patient is examined for discharge from a hospital, if he is found to have any enlarged glands, his stay should be prolonged.

The author also advises a systematic and thorough disinfection of the nasal cavities before the patients are sent out. He believes that a convalescent ward in which the patients could be prepared for a week prior to dismissal would be greatly to the advantage of the general health. Two such wards to be used alternatively, and disinfected when not in use would be even better.

He concludes that the minimum period of retention in hospitals should not be less than eight weeks, and the maximum thirteen weeks.

S. McC. Hamill.

Bronchial and Vesicular Breathing. (*British Medical Journal, Nov. 13, 1897.*) By Wilfred J. Harris, M. D., Cantab., M. R. C. P.

In discussing this subject the author remarks, in the way of explaining the respiratory murmur as heard in normal conditions over the chest wall, that it is almost entirely inspiratory. He calls attention to the fact that murmurs, whether cardiac or pulmonary, are produced by means of fluid veins. As long as the walls of a vessel are smooth, fluid veins are not caused during the passage of fluids through it or its subdivisions, so long also as each branch is not larger in calibre than the original tube. As soon as the tube enlarges, however, then fluid veins are produced and murmurs are to be heard. An examination of the air passages shows two points at which the air passes, during inspiration,

from a smaller to a larger channel. The first is at the glottis where the vibrating eddies of air cause the normal laryngeal breathing, and since the cavity enlarged both above and below the glottis, inspiratory and expiratory sounds are more or less equally produced. From the glottis to the periphery of the air channels their walls are smooth and their calibre gradually diminishes in size to the bronchioles. At the junction of the bronchioles and the infundibulum, beset with air cells, the channel suddenly enlarges to three times its diameter. This condition again causes the formation of fluid veins during the act of inspiration. This, the author considers, the key to the production of the vesicular murmur which is so different in character from the laryngeal inspiratory sounds. This also explains the reason of its being heard only in inspiration. In expiration the reversal of these conditions forbids the formation of fluid veins and consequently there is no murmur. In quiet respiration the increase in the size of the bronchioles and bronchi is not abrupt enough to cause fluid veins sufficient in intensity to give rise to an audible expiratory murmur until the union of the larger bronchi and the two main bronchi is reached. In forced expiration the expiratory murmur may, however, be produced and heard over the entire pulmonary area. The two factors entering into the production of amphoric breathing, which cause it to differ from laryngeal breathing are, first, the reverberation of the conducted glottic sounds in the cavity itself, causing the breathing to resemble the sound made by blowing across the mouth of an empty bottle ; and, secondly, the causation of the fluid vein by air passing from a small bronchus directly into a pulmonary cavity. In expiration no murmur is actually produced in the cavity itself. This explains the louder sounds frequently heard during inspiration than in expiration over the cavity. This element is wanting in consolidation, so in ordinary bronchial breathing the expiratory sound is often equally as loud as the inspiratory. The author concludes, first, that the various forms of breath sounds to be heard are due to the production of fluid veins and vibrating eddies of air, both in inspiration and respiration. Second, that the glottis is the main source of most of the varieties of breath sounds. Third, that vesicular breathing is not glottic in origin, but that the sound is produced peripherally, each infundibulum contributing its quota. Fourth, that in certain conditions, as in tuberculous cavities, pneumothorax, or bronchiecatasis, there are local causes which are productive of murmurs, which may be superadded to or even replace the glottic sounds.

S. McC. Hamill.

Heredity and Degeneration. (*Archives of Pediatrics, December, 1897.*) By F. M. Crandall, M. D.

The author calls attention to the following facts, which he believes are generally misunderstood :

1. Heredity and degeneration are two totally different phenomena. One is an inheritance of tendencies or qualities possessed by the ancestors ; the other is a loss of those qualities. The one produced a condition similar to that of the progenitor ; the other, a condition dissimilar. The one is always transmitted ; the other may be transmitted or acquired.

2. There is a condition of gradual, progressive degeneration requiring several generations for its complete course, which is entirely different from heredity.

3. There are elements of good heredity which are as potent as those of bad heredity. Health, vigor and a sound constitution are transmitted with as much certainty as are rheumatism, gout, and tuberculosis.

4. A tendency to certain diseases shown by one parent may be partially or wholly neutralized by a sound constitution in the other parent.

5. A tendency to a given disease possessed by both parents may sometimes be seen in intensified form in the offspring.

6. A powerful tendency on the part of nature to preserve the species and revert to the common type, is a constant and potent factor in preventing the repetition of extremes, either good or bad, and maintaining the type undegenerated.

T. E.

Etiology of Melena, (*Wien. Klin. Wochenschr., 1896, No. 41.*) By N. Swoba, M. D.

The author advises the inspection of the nares when other parts fail to show any cause. He mentions four cases in which death resulted from bleeding from the nasal mucous membranes, the blood being swallowed and subsequently vomited and passed by the bowels. In the first case there was gonorrheal conjunctivitis, which extended to the nose. The nasal discharge was not examined for gonococci.

The second case was due to a meningitis which caused nasal hemorrhage.

The third and fourth patients both suffered from hereditary syphilis and diphtheria, with a hemorrhage from a necrotic patch in the nose.

NEWCOMET.

THERAPEUTICS.

A Plea for Chloroform. (*The Practitioner, December, 1897.*) By G. L. Kerr Pringle, M. D., (Edin.)

The author says that in Edinburgh they consider that chloroform can be given in every case— infants, adults and in old people—although it may be better in some cases, once a patient is under it, to substitute ether. No aparatus is required to be carried about. A towel is always at hand, and two ounces of chloroform occupy little space.

Looking at the question from a hygienic point of view, the mask, however carefully it is kept, must always smell and be objectionable; the air bladder must contain the germs of previous patients' exhalations, not to speak of the patient having to inhale the exhaled breath of the anæsthetist, who blows up the bag before fixing it to the inhaler. If experiments have been made in attempting to cultivate the bacteria, which must be present in a frequently used air bag of a Clover's inhaler, he has been unable to find records of them; that they are present there can be little doubt, and in giving an anesthetic with a Clover's inhaler to a patient with a damaged lung, we undergo a grave responsibility. Again, the majority of patients prefer chloroform to ether, as more pleasant to inhale, and, as a rule, the after-effects are less, and do not continue for for so long a period. Death from chloroform administration in Edinburgh is looked upon as a rarity.

In Scotland the non-existence of coroners' courts explain the reason to some observers, of the smaller death-rate—*i. e.* they infer that in Scotland the deaths are not all reported, even then the average would fall far short of what it does in England and Wales. He does not wish to imply negligence on the part of the administrators, for deaths have occurred in the hands of the most skillful and the most careful. But what he maintains is, that the men leave the majority of the schools with the most loose and vague instructions and ideas of how to give chloroform. Once the men are qualified, and take up appointments in the provinces, they immediately start to give chloroform, simply because it is the most convenient; and while chloroform remains the most convenient anesthetic, the more frequent will be its use. If the schools will continue to go on teaching the men how to administer ether, putting aside chloroform, except in occasional cases, on the ground that it is dangerous, so long will our medical papers report an increasing death-rate from chloroform anesthesia. If a man has been taught to give ether, and is acustomed to its administration, by all means let him continue to give it; but do not let him occasionally give chloroform in cases in which he would not consider ether satisfactory, because their administration is so entirely different that, having learned ether administration, it does not follow that he is competent to administer chloroform.

The advantages and disadvantages of ether we are all familiar with, the chief advantage being that the maximum doses is so very much greater than that of chloroform, and that there is, therefore, less danger of suddenly reaching it. Still, however, we cannot get past the fact that chloroform is the more convenient anesthetic, and it becomes the bounden duty of the schools, and those in authority, to see that its administration is thoroughly taught. It rests to a large extent with the various medical schools and their teachers whether in the future we are to continue to have an increasing death-rate from chloroform anesthesia. It is absolutely necessary that each student should have *indivdual* clinical instruc-

tion, that he should be compelled, at his final examination, to produce a certificate stating the fact that he had personally administered chloroform in a certain number of cases, and that he is conversant with all the phenomena of chloroform anesthesia, and thus lessen the reproaches of those advocates of ether who are inclined to accuse those of crime who adhere to the use of chloroform.

P.

Calomel as a Curative Agent in Diphtheria. (*The Annals of Hygiene and of Medicine, Vol. XII., No. 11.*) By Leonard D. Judd, M. D.

In his paper read before the American Climatological Association, the author states that he has met with excellent results in the use of this form of mercury in the treatment of diphtheria. He insists that it should be given in large and frequently repeated doses.

To a child eighteen months old he gave ten grains of calomel as an initial dose and five grains every hour after until eight doses were given, when free characteristic evacuations occurred. He does not state how long the child had been suffering with the disease, but says that she had grown steadily worse under the ordinary treatment, and before the use of calomel was commenced was in nearly moribund condition. She began to improve, however, after the fourth dose, making a splendid recovery without the slightest ill effects following.

In another case of a woman, 55 years of age, who was inoculated with diphtheria by being scratched on the finger by a child having a malignant form of the disease, twenty grains were given the first dose, followed by ten grains every hour (giving in all three hundred and sixty grains) when copious dejections occurred. Recovery in this case was also rapid.

His method is to give these large doses until there is secured from the bowels a green, copious, frothy discharge resembling "frog-spittle." As a means of diagnosing diphtheria from other throat affections this treatment has some value, as in true diphtheria, he says, calomel is slow to act on the bowels and the more severe the attack, the larger the doses required to secure this effect. He also recommends in malignant cases local applications of an aqueous solution of calomel, but as a rule has not found it necessary to use a gargle or spray, though in ordinary cases he frequently uses diluted peroxide of hydrogen in this manner and later a solution of chlorate of potash, iron, and glycerine, locally, and the same internally during convalescence.

KINNE.

SURGERY.

Some Intestinal Experiments: A Rapid Method of Enterectomy. (*Lancet, October, 1897.*) By H. Martyn Jordan.

The author recounts some very interesting experiments in enterectomy upon dogs. He has endeavored, by his modifications of the usual methods, to obviate the danger arising from the presence of a large metallic Murphy button and the subsequent risk of obstruction. The time required for the performance of his method, which should not exceed twenty minutes, is much less than is necessary to carry out the technique of Senn's, Maunsel's, or Paul's methods.

In order to bring the ends of the gut together, and also to afford support during the suturing, he used hollow truncated cones, preferably made of carrots ; but turnips or potatoes may be used. Each cone was furnished with two sutures, which were passed through its walls, from the apex to the base, one on each side ; a knot at the end of the suture being pulled through the cone. Having made the necessary resection of the intestine, at the same time always removing a wedged-shaped portion of the mesentery, the cones with their sutures in place were inserted, apex first, into the lumen of the bowel an eighth of an inch from the cut margin, one at the mesenteric attachment, the other directly opposite. The ends of the gut were then approximated and the cone sutures tied, slight inversion of the ends occuring at the points of suture. The union of the gut was completed by a continuous "double turned" suture through the serous and muscular coats only. This suture, really a modified Gely, consisted of fine Chinese twist silk, with a needle threaded on each end. Beginning at the mesenteric attachment, in order that the most difficult portion might be sutured first, one needle was inserted an eighth of an inch from the cut margin of the bowel and passed along parallel with it for one-eighth of an inch ; the other needle was then used similarly on the other cut end. The entry and exit of the two needles being opposite each other respectively. The suture was drawn through equally on both sides, and the right hand needle, after giving it a double turn around the left to prevent the suture from slipping, was then brought over the cut margins and inserted close to the exit of the left and used as before ; the left needle was in like manner inserted on the right side. In this way the bowel was rapidly surrounded, the edges being inverted as the stitches were drawn tight. The needles used were straight and round, with fairly large eyes. The gap in the mesentery was closed with a continuous overhand suture.

In his earlier cases an omental graft was applied around the bowel at the seat of resection ; but was subsequently omitted because it became greatly thickened, and, finally, by its contraction and adhesion to surrounding structures, great narrowing of the lumen of the bowel resulted. Large annular folds of the wall of the bowel were also produced, which, by acute bending of the gut, caused in three cases partial, and in one case, complete occusion.

Mr. Jordan reports fifty-five cases in which he performed this operation. In his earlier operations, while he was experimenting with differ-

ent cones and sutures, his fatality was large ; but in the last thirty-two cases he performed the operation just described with a morality of 6.2 per cent.

WALTER ROBERTS.

On the Surgical Treatment of Enlarged Prostrate. (*The Scottish Medical and Surgical Journal, December, 1897.*) By Charles W. Cathcart, F. R. C. S. E.

The author says we may say that when surgical interference is first called for on account of increasing difficulties in the use of the catheter, a progressive quantity of residual urine or recurrent attacks of cystitis, while as yet there is no reason to fear kidney disease, prostatectomy and vasectomy (perhaps of one side only to begin with) may be offered for the patient's choice. Either, at this stage may be said to have a very small mortality (perhaps 3 or 4 per cent.). Prostatectomy would probably have the slightly higher mortality of the two, and the effects of the operation could not be guaranteed as permanent, but it would leave the patient with full sexual power. Vasectomy with a slightly lower mortality would at this stage cure not only the condition but the tendency to it ; but the patient would be sterile if both sides were done, although probably not impotent for some years to come. From this stage onwards the risks of both operations would increase, that of prostatectomy keeping rather in front of vasectomy, but either being in many cases not only justifiable, but highly advisable in view of the very painful death which follows from leaving bad cases to take their course. Vasectomy would be especially indicated where the prostate could be felt from the rectum to be enlarged as a whole, where it was soft and succulent rather than hard and fibrous, and where there was no reason to believe from information gained in passing the catheter or from the cystoscope (if it could be used) that the chief cause of obstruction was a marked valve-like enlargement at the neck of the bladder. Prostatectomy on the other hand would be especially indicated where these conditions were reversed.

In the most advanced cases, even vasectomy will be a serious risk to life, and if a catheter cannot be introduced and tied in for constant suction drainage, supra-pubic puncture or Harrison's direct perineal puncture and drainage will be the only alternatives left.

T. E.

The Effect Which the Discovery of the X-Ray May Have Upon the Treatment of Injuries by Bullets and Other Foreign Bodies. (Editorial in *Medical Review, December, 1897.*)

The readiness with which bullets and many other foreign bodies may be discovered by the Roentgen rays would *a priori* indicate a revolution in the treatment of the pistol-shot and gun-shot wounds where the bullet is buried in the tissues. The same would *a priori* also seem to be true of other foreign bodies that are not readily penetrated and therefore read-

ily detected by the *x*-ray. But upon closer scrutiny this discovery may eventually not result in quite so radical a change as it would appear at first sight. In fact, no less a weighty authority than Prof. v. Bergmann, of the University of Berlin, seems to ascribe but little advantage, as far as treatment is concerned, to the use of Roentgen rays for locating bullets in the tissues. From what we know of exact experimental research to which we have referred in the foregoing lines, we are inclined to think that there is a good deal of truth in v. Bergmann's view. It is not the presence of a bullet itself—for it is aseptic—that causes dangerous inflammation, for instance, in joints and in the brain tissues, but the presence of the organic material, for instance, a piece of cloth, which is carried along with the bullet and which may harbor pathogenic germs. Removing the bullet soon after an injury might therefore leave behind the main *corpus delicti*, the piece or pieces of cloth which, like other organic material, are readily penetrated by the *x*-rays, and therefore invisible upon their application. In the meshes of the porous piece of cloth pyogenic micro organisms would have a good chance to form toxins, and, therefore, cause an intense purulent inflammation. By cutting down deeply upon the bullet, after its location by the *x*-rays, the access of air to the pyogenic germs would consiberably facilitate the growth of the pyogenic micro-organisms and the production of the intense inflammation, while without such an access of air the physiologic means of defense which are at the disposal of the animal organism, may make innocuous a moderate number of pathogenic germs ; an occurrence which has frequently been observed in military practice during times of war. The opinion of v. Bergmann, that the discovery of the Roentgen ray would be of little value with regard to the extraction of bullets soon after the injury is based upon the astonishingly favorable progress of bullet wounds in his war practice where the entrance wound is carefully sealed and thereby the air excluded. There cannot be any question, of course, that in some cases the *x*-ray will be of invaluable service, but its value in locating bullets soon after an injury may have been overestimated.

Surgery in the Neck. (*Northwestern Lancet, September 1, 1897.*) By Charles H. Mayo, M. D.

The author gives the following valuable suggestions in a paper read before the Section of Surgery of the Minnesota State Medical Society, June 18, 1897 :

Incision in surgery of the neck is by no means of the least importance. Its careful adaptation to the case, giving free access, yet avoiding unnecessary or accidental injury with as little disfigurement as possible, is the difference between good and bad surgery. The incision is best curved, to follow the line of natural creases, as pointed out by Kocher,

unless otherwise indicated. Vertical incisions in the meridian line are very productive of scar-formations, as also are those incisions ending over fixed points. For this reason curved flaps are best made for large exposures, according to Chiene. The long transversely curved incision gives sufficient space for the removal of very large struma.

The extensive incision so frequently required for the removal of the tubercular and other forms of diseased glands, involving the various triangles of the neck, is best made after the S-plan, one of frequent application in Professor Senn's clinic, and is preferable to the Z-incision of Fenger, as the points of flap in the latter incision are more difficult of coaptation. The margin of long incisions should receive slight nicks at points to serve as skin marks for acute approximation. The incision of the neck, involving the region of the platisma, should include this muscle in the flaps raised. The transverse incision for struma should sever the sterno-hyoid and thyroid muscles, which are again united with the deep fascia ; additional space is secured by nicking the sterno-mastoids and freely retracting them. In extensive gland-removals he has, in many cases, severed the sterno-mastoid muscle completely in its center, by the Step method, and turned flaps both ways, reuniting by the catgut mattress stitch. This method was later modified by cutting only the clavicular portion or tensor of the muscle at its point of union with the sternal portion, as recommended by Fenger. This relaxes the tension and allows the muscle to be freely dissected and lifted, thus exposing the complete vessel and nerve region of the carotid and jugular. After resuture we are less liable to have atrophy of its lower half. The complete freeing of the sterno-mastoid from the deeper tissues is essential in removal of the gland-bearing fascia. The omo-hyoid in the lower triangle may be severed, in some cases, but this is seldom necessary. When performed the precaution of marking the ends with black silk is of advantage in its readjustment.

Large veins, such as the external and anterior jugular, are best cut between forceps or ligatures. All veins cut near their union with large venous trunks should be ligated as soon as isolated, to prevent accidental injury. A tear in the wall of a large vein may frequently be secured by a lateral ligature, preserving the function of the vessel. Dr. J. B. Murphy has recently made extensive investigations concerning the anastomoses of large vessels by lateral and end-to-end approximation by suture, and has reported successful cases. In certain cases of extensive glandular disease in which intimate adhesions to the internal jugular are present, the application of a temporary ligature of heavy silk tied with a bow knot to the vein and removed at the close of operation, will relieve much anxiety of air embolism. After witnessing a death from air embolism such apparent excess of care will not seem like a waste of time.

In operating for the removal of large goitres the principal difficulty is with venous hemorrhage. This may be readily controlled if the thy-

roid body is freely exposed to its true capsule, its surface rapidly separated from surrounding tissues by the fingers and the tumor lifted out of the incision, ligating and cutting between ligatures, keeping close to the true capsule, especially beneath the tumor, thus avoiding the laryngeal nerve. We do not hesitate to cut through a large area of the thyroid tissue, in deciding upon the amount to be removed, if we suture the stump with catgut. This operation loses many of its apparent dangers when we consider that aside from its four thyroid arteries its venous return is nearly as constant—the superior and inferior accessory, the thyroidean veins on each side, and the superior and inferior communicating veins. Cystic goitres are approached by the same method, the cyst evacuated and its inner sac removed, similar to an adherent ovarian cist.

The complete removal of the tongue properly belongs to the surgery of the neck, and is best performed by an inverted Y-incision in the median line, through the soft parts, and in the inferior maxilla, its lateral arms serving for the removal of the submaxillary glands and gland-bearing fascia, also the ligation of the lingual arteries. Separation of the two halves of the lower jaw then admits of a free and bloodless dissection.

The superficial cervical nerves exposed upon lifting the platisma are guides to the posterior border of the sterno-mastoid muscle winding over the posterior edge at about the middle.

The spinal accessory emerges from beneath the muscle three-fourths of an inch above this bundle of superficial nerves passing backward to supply the trapezius muscle. All of the superficial cervicals may be sacrificed without hesitation, as well as the posterior portion of the spinal accessory, if the gland involvement is extensive. The spinal accessory should be saved if possible, and this may be easily accomplished if early isolated to prevent its accidental injury. Mays has had good results in suture of this nerve, when incised. The loss of its function produces a disagreeable shoulder droop. If it is injured above its entrance into the sterno-mastoid, the scaleni muscles assume its duties to good advantage. The after-results of operation in the upper anterior cervical triangle are often marred by injuring the lower branches of the facial, causing a drooping of the mouth-angle. Injury to the hypoglossal and other deep nerves is usually the result of accident, and due to working very deep through a small external incision. Occasionally such injuries have occurred in the work of our best surgeons, especially in malignant growths, and cases where there has been much inflammatory exudate.

In reference to the removal of tubercular glands, the idea is not to remove the enlarged glands alone, but the whole gland-bearing fascia, to obtain a cure and render subsequent operations unnecessary. The rule of Langenbeck to free the dangerous points first is most applicable in surgery of the neck. Make a slow dissection from the internal jugular and subclavian veins first, then use the scissors freely, lifting the whole

fascia with glands intact down to the deep cervical plexus. The upper end of this tissue will be at the styloid process back of the tonsil. In removal of malignant disease much more extensive mutilation would be justified than in operations upon benign growth, and in such cases we should not hesitate to remove muscles, vessels, nerves, and all tissues not strictly necessary to life. The second rule of Langenbeck to ligate the base of malignant growths early is applicable here.

He prefers, in the majority of cases, to drain the wound at its most dependent portion through a separate incision, and strive to secure complete healing of the line of incision as soon as possible, draining cavities with tubular drain for two days, and spaces with folded rubber tissue from four to six days. In septic cases, we may frequently secure primary healing by inserting loose sutures of silkworm gut and packing the wound open for two days, adjusting the sutures upon removal of the pack —the method of Billroth.

His usual method of closure is by a few interrupted sutures of silkworm gut, dyed in logwood solution, to favor removal, tied without tension, and the careful approximation of skin edges by horse hair sutures, sealing the line of suture with gauze and collodion, applying a moist antiseptic dressing over all. The subcuticular stitch is of frequent service in preventing suture scar. This method of closure will secure a large proportion of primary unions. Should suppuration occur, the frequent changing of moist boracic acid dressing under oiled paper soon secures a dry, granulating wound.

P.

OBSTETRICS AND GYNECOLOGY.

Seven Cases of Pregnancy Complicated by Chorea. (*The Practitioner, December, 1897.*) By W. R. Dakin, M. D.

Chorea in pregnancy, is of special interest because of its comparative rarity and its much higher mortality than in childhood. It is more common in pregnant adults than nonpregnant, but the mortality may be no higher. Its greater frequency in pregnancy is probably due to the fact that at that time a woman's nervous system resembles that of childhood, and she is subject to the nervous diseases of that period.

The author reports nine cases of adult chorea. Seven of these were in pregnant women, two of whom died with hyperpyrexia. Of the other two cases, both of which died, also with hyperpyrexia, one was not pregnant and the other was doubtful. In the other five cases the attack was not so severe and was followed by recovery. Mania was present in all but the least severe case, either before or after delivery. Five of the seven were primigravida showing its greater frequency in first pregnancies. Six give histories of previous attacks of chorea or rheumatism and all but one were under twenty-five years of age. They all appeared before the

seventh month but none made any attempt at spontaneous abortion. All had mitral bruits but one and that one showed the mitral valve affected on postmortem examination. In only two of the cases were the spasms very severe, but in none of them did the induction of abortion greatly alter their severity, and yet it seems to offer the best chance for recovery. Drugs have little or no influence before the uterus is emptied, except in very mild cases. Chloroform is only effectual while being used; it causes no lasting improvement. Hyoscin seems to be of some value. In all the fatal cases the temprature rose suddenly before death to 106° F. or over. Wet packing was tried in one case but was of no value.

Cold baths were not tried, but it would seem well to take the temperature every hour in severe cases and try the cold bath whenever it reached 100°, as all of the cases where the temperature rose above 100° proved fatal. The nonpregnant cases behaved exactly like the pregnant. Always induce labor under anesthesia as soon as mania appears, however mild the spasms, or without mania, if the spasms are severe enough to keep the patient awake at night. The prognosis depends upon the severity attained within a week of the first appearance.

GIRVIN.

An Address on Tubal Gestatation With Special Reference to its Early Diagnosis and Treatment. (*The Clinical Journal, December, 1897.*) By Charles J. Cullingworth, M. D., F. R. C. P.

The author calls attention to the fact that this condition, once thought to be a rarity, is now known to be of frequent occurence. He affirms that all cases are primarily tubal. As a general cause he advances the idea that as the normal meeting place of ovum and spermatozoon is not definitely known, it may be that all cases are simply due to their union in the tube instead of in the uterus. He believes that the usual termination in both early and late cases is not rupture but a discharge of blood through the patulous abdominal extremity of the tube, thus causing hematocele. This discharge of blood is possible from the fact that the abnormal end of the tube remains patulous when the pregnancy develops in the inner half of the tube, and although it closes when the ovum is in the outer half between the sixth and eighth weeks it at first becomes greatly evidenced.

In those cases in which the termination is rupture, it is not due to the growth of the embryo, which is gradual, but to a sudden distension by a subchorionic hemorrhage. The diagnosis often presents great difficulty before hemorrhage has occurred around ovum. After hemorrhage has taken place the diagnosis rests on the symptoms of pain, irregular hemorrhage, amenorrhea, and enlargement of tube and uterus. The pain is situated in one or the other side of lower abdomen and frequently recurs. This recurrence is probably due to fresh hemorrhage. It is to be noted, however, that pain is not a constant symptom of the condition.

The uterine hemorrhage is in part due to irritation set up by the pregnancy in a tube still connected with uterine cavity and in part to the attempts of the uterus to dislodge the decidual membrane.

The writer particularly calls attention to the peculiarity of the discharged blood, which he says is almost always very dark in color and thick in consistence, moderate in amount, and steady in its rate of flow.

He also calls attention to the variation in the position of the extrauterine pregnancy in the different cases, stating that it may be found in Douglas' pouch or above the uterus attached to either cornua.

He also attaches importance to the observation that hematocele may be entirely limited to one or the other side of the pelvis, the pouch of Douglas being entirely free.

He believes that the treatment is operative in all cases, except a very few of early tubal abortion with hematocele.

NICHOLSON.

The Value of Antipyrine in Labor. (*Therapeutic Gazette, November, 1897.*)

Misrachi says that it is useless in the pains of normal labor, but that it is of value when the pain is so excessive that the uterine contractions are interfered with. In tedious labor it is also of use to control severe pains. After early discharge of liquor amnii with the os remaining rigid it is also of use.

In the second stage of labor it is useless. There is some evidence that it is efficient in control of after-pains and to quiet pain occurring before full term has been reached.

NICHOLSON.

Postmortem Delivery. (Editorial in *Lancet, December 2, 1897.*)

In German medical literature is found a term for which as far as we are aware there is no English equivalent, viz.: "Sarggeburt," which literally translated means "coffin-birth"—that is to say, that a pregnant woman dies and the body is placed in a coffin, and then before or after burial delivery takes places. Very few cases of this kind are on record. A notable case, however, is recorded by Dr. Bleich, of Tschirnau. Before proceeding to describe the case Dr. Bleich makes some remarks on the theories that have been advanced to account for the causes which bring about postmortem delivery and states that two explanations have been advanced; the first supposes that the pressure produced in the abdomen by the gases evolved in postmortem decomposition is sufficient to cause the expulsion of the uterine contents, whilst the second suggests that the necessary force is brought about by the condition of rigor mortis into which the muscular structure of the womb is thrown. Proceeding then to a description of the case which he himself observed, Dr. Bleich records that on July 6th the dead body of a woman was found ly-

ing in a shallow pool of water. It was ascertained that she had escaped from her home in a state of insanity. On examination no signs of injury could be found with the exception of slight bruises on the knee; it was found that she was pregnant, probably in about the seventh month. Postmortem rigidity was present; a few postmortem stains were found on the back. It was concluded that the body had only been a short time in the water. and that all the evidence pointed to a suicide, and the burial took place on July 9th. Eight days after the finding of the body it was ascertained that three young laborers had had sexual intercourse with the deceased woman shortly after one another. They were arrested and closely questioned, and all three persistently denied that any criminal force had been used ; but, on the contrary, said that the woman had been a consenting party. Exhumation of the body was ordered and a postmortem examination was made on July 19th. Delivery was found to have taken place after the coffin had been closed with complete inversion and prolapse of the uterus and vagina. A full account of the necropsy is given in Dr. Bleich's paper. We can only give a brief extract. The abdomen was greatly distended, but exhibited no signs of injury. Between the thighs lay a dark-red mass (the uterus) about the size of a head, from the under side of which sprang a dark umbilical cord, and connected with the latter was the body of a child 36 cm. in length. The vulva was wide open. The uterus was flabby and like a sac and lay with its inner surface pressed against the thighs together with the vagina ; the placenta had separated and was dark-brown in colour and of a hard consistence. The muscular walls were thin and brittle. Dr. Bleich suggest that the violence experienced by the woman shortly before death had been of such a nature as to render abortion probable, and that the collection of gases of decomposition in the abdomen had been sufficient to complete that process and also cause the condition of the uterus found on the exhumation of the body.

P.

An Infant of Unusual Weight. (*Archives of Pediatrics, December, 1897.*) By T. P. Satterwhite, M. D.

The case reported possesses no especial interest, except that it was a remarkable birth, owing to the great weight of the infant. The child weighed, when delivered, nineteen pounds. The mother was a multipara ; there was not the slightest laceration of the soft spots, and she made an unusually rapid recovery.

PEDIATRICS.

A Frequent Significance of Epistaxis in Children, (*Archives of Pediatrics, August, 1897.*) By J. H. Fruitnight, M. D.

The author reports the following case : A girl of 8 years consulted him because of recurrent attacks of epistaxis. There was no lesion of

the nasal cavity. A physical examination showed a mitral regurgitation with some hypertrophy. There was a history of rheumatism. Treatment was prescribed for the cardiac condition, and as a result the nasal hemorrhages ceased. The patient had been treated by a rhinologist of good standing in the profession. The fact of a prolonged course of treatment by him without any benefit to the patient led the author to a careful study of the physical condition of all children, the subject of epistaxis, and, on the other hand, to the inquiry in all cases of cardiac diseases as to the presence or absence of epistaxis. He found the conditions associated in twelve cases. All the patients had valvular lesions, some mitral, others aortic, and in two cases a combination of the two. All cases showed either hypertrophy or dilatation. All had previously had at least one attack of acute articular rheumatism. In some the rheumatism had been a sequel to or a complication of scarlet fever. In some others, chorea co-existed. The rich supply of blood vessels to the nose, the large venous cavities between the periosteum and mucous membrane, especially posteriorly on the turbinated bones, and the enormous anastomoses between the arteries of the mucous membrane predispose to nasal hemorrhage. Changes in the blood pressure will cause a red, swollen, turgid mucous membrane. In childhood the pituitary membrane is loosely connected with its base, and is covered with a very delicate cylindrical epithelium. This gives but a weak support to the walls of these congested vessels. When the lateral pressure within the blood vessels of the nose is changed, as when there is a restriction to the flow of blood through the veins, or an increase of pressure with the arteries, these are conducive to the occurrence of hemorrhage. Paroxysms of whooping cough are an illustration of the first. Hypertrophy of the left ventricell of the heart is an instance of the second variety of departure from the normal blood pressure.

The author recommends a local application of lemon juice as the most effective remedy for epistaxis, next to the mechanical measures. He insists upon a careful physical examination in all cases of epistaxis.

S. McC. Hamill.

Concerning the Importance of Splenic Tumors in Rachitis. (*Duetsches Archiv für Klin. Medicin, Bd. LVII., P. 265.*) By von Starck.

The author found rachitis to exist in 31 per cent. of the children who came to autopsy in the Medical Polyclinic at Kiel. In 68 per cent. of these, there existed palpable enlargement of the spleen. In considering the importance of splenic tumors in connection with rachitis, it is essential that one bears in mind the following facts: That in a child under one year of age, the spleen is more palpable than in adults. One can get under the margin of the ribs better. In a child of this age, the spleen should not be considered unless it is within 2 cm. of the border of the ribs. One must remember also that the degree of rachitic changes

in the bones bears no constant relation to the splenic tumor and that in sections upon young children a splenic tumor is frequently found where rachitis does not exist. Thus gastro-intestinal conditions and disease of the lungs lead very soon to some enlargement of the spleen while congenital syphilis, even in combination with rachitis, does not necessarily give rise to enlargement of the spleen. Dr. Starck does not think there is any connection between the increased size of the spleen and the enlargment of the bronchial and mesenteric glands, nor between the liver and enlarged spleen.

From these facts, the author declines to accept the view advanced by Vierordt, that there exists a close relation between rachitis and enlargment of the spleen.

He thinks it a false position also to look upon rachitis as an infectious disease on account of the frequency with which it is accompanied by increase in the size of the spleen.

S. McC. Hamill.

Two Cases of Paroxysmal Hemoglobinuria. (*Münch. Med. Woch., 1897, No. 18.*) By J. Trumpp.

One case occurred in a girl of five years. Since her third year every time she caught cold she developed hemoglobinuria.

Examination of the urine showed no red cells. There were, however, large quantities of hemoglobin, chiefly in the form of reddish-brown, shining flakes, considerable kidney epithelium and leukocytes. Following these attacks, the urine gradually became normal. As a result of an ice-cold foot-bath, an attack was induced. The urine again gradually returned to the normal after three weeks.

An eight-year-old brother of the first patient reacted in the same manner to cold foot-bath. The local action of cold upon the finger of this patient caused the following changes in the blood: There were small crystals of hemoglobin, poikilocytes, and diminution in the formation of rouleau. These attacks lasted twenty-four hours. The urine showed leukocytes, kidney epithelium, and casts.

S. McC. Hamill.

A Case of Friedreich's Disease With Autopsy and Histological Examination. (*Le Progrès Medical, Sept. 4, 1897.*) By Dr. J. Simon.

The patient was a boy of ten years. The family history was negative. There was no history of convulsions. At the age of two and one-half years he had pains in his legs and some eye-trouble. This latter condition interfered with his going to school. His intelligenee was considered good, but he did not advance mentally on account of his absence from school. At five years of age he had dysentery and during convalescence the parents noticed that he did not walk as well as he had previously done.

Examination made in February, 1891, was follows: The child is of medium height, strumous aspect; there is a chronic blepharo-conjunctivitis, traces of keratitis, and a chronic coryza. The head is asymmetric, the physiognomy shows little intelligence. The child smiles while talking, consequently, speech is a little slow and jerky. It is not known when this first began. There is no nystagmus, no alteration of the sensibility, no paralysis of the sphincters, knee-jerk absent. The movement of the upper extremities is normal. The upright position is difficult, the whole body sways. With the eyes closed this is even more decided. The gait resembles that of a drunken man. The child falls frequently in playing.

A note made in August, 1896, is as follows: When the child is at rest, there is a slight trembling of the head. When the hand is extended flat, there is subsultus and fibrillary movements. There is no loss in the muscular power in the upper extremities. Sensibility is normal. At this time the legs cannot support the body. The child has not walked for a year. He moves about by dragging himself along on his ischii, his knees together and his legs spread apart, the internal maleoli resting on the floor. The muscles of the calf are atrophied. There is almost complete atrophy of the muscles of the sole of the foot. The great toes can be moved, but are flexed with difficulty. The foot is flexed only when resting with the inner aspect on the floor. The knee-jerk is absent. Sensibility is normal.

Eye-examination: Pupils normal. Crossed diplopia, induced by fixing the eye previously and for a long time on a given point. The mouth is half open and the lip a little retracted. The child is unable to whistle. There is no scoliosis, but at the base of the first dorsal vertebra there is a decided prominence and the spinal epiphysis is not on the same plane with the others. There is tenderness on pressure.

Examination of sensibility: There is a sense of intense heat in the lumbar region, and a sensation of pricking in the calves of the legs. Intelligence is mediocre. The child is bad tempered, speaks slowly, and breaks into laughter while speaking, Attacks of occipital cephalalgia are frequent, and following these there is profuse vomiting. These attacks are preceded by vertigo. The child often wets the bed and is habitually constipated.

After complaining of more than usual headache one day he was found dead in his bed on the following morning.

A complete autopsy showed no cause for the sudden death. The thoracic and abdominal viscera were normal.

The examination of the brain and cord: There was no macroscopic irregularity and no focal lesion in the cerebrum. The cerebellum was normal. The cord appeared shrunken and collapsed, especially in the posterior columns, in the portions most remote from the lateral columns. Transverse sections showed the white substance in the sunken portions

very grayish, hard to touch and contracting sharply with the usual "mother-of-pearl" color which still showd in the fibres remaining intact. The cord was hardened in Muller's fluid.

Sections were examined from the sacral, lumbar, upper dorsal, middle cervical and from the medulla. They were cut transversely and stained by the Wiegert-Pal method, in picrocarmin and hematoxylin.

The conclusions reached were: First, that the cord was the seat of a combined sclerosis (posterior cords, the pyramidal tracts, and direct cerebellar tracts) which resembles exactly that found in the autopsies of Friedreich's disease; second, there existed a lesion of the cells of the gray substance which is to be described in a later communication.

S. McC. Hamill.

Treatment of Infantile Uric Acid Infarction. (*International Clinics, Vol. III., Seventh Series.*) By W. C. Hollopeter, M. D.

The writer mentions the case of a child four weeks old without any evidence of functional derangement the first week except a tendency to cry violently and spasmodically.

He says: "The nurse informs us that the crying seems to precede the alvine and urinary excretions, yet during the first two weeks these functions were seemingly performed naturally. During the last week the distress has been decidedly augmented. On examination we find the child probably under weight, with apparent loss of the subcutaneous fat, slight depression of the anterior fontanel, a dry, harsh skin. The crying does not seem to be caused by handling, nor does it occur during nursing. The nurse informs us that immediately after a violent paroxysm of crying she finds the napkin slightly stained by a brownish-red fluid. This is the altered urine, the cause of the infant's distress. The diagnosis is easily made: it is one of the most frequent disturbances of early infancy—uric acid infarction. The symptoms give rise to pain, in extreme cases—like the one before you—to violent spasmodic crying, associated with the act of urination, scanty urine, sometimes anuria, slight inflammation of the renal tubules, dry skin, and restlessness, and occasionally blood may be associated with the scanty urine. This condition occurs, more or less, in all children during the first two weeks of life."

The cause is evidently due to the excretion of uric acid crystals before there is sufficient fluid to dissolve them, so the crystals form in the tubes. This condition is a very strong plea for plenty of water in the young infant's system. Bottle-fed infants are more frequent sufferers than those breast-reared, yet the trouble frequently arises in both. In both cases it would appear that the food was too frequently exhibited, or of too strong a nature. The urine of properly fed young infants is perfectly colorless, it will not stain the napkin at all; hence any departure from this standard must be looked upon as abnormal; this condition you must strive to

gain at all times, and instruct the nurse and mother accordingly. The treatment is to correct the food if artificially fed, establish correct habits of maternal nursing if faulty, administer plenty of water frequently during the intervals of nursing, giving some alkaline diuretic if the case is troublesome, such as citrate of potassium or liquor potassium—one grain of the former and one drop of the latter given in plenty of water.

For the paroxysms of suffering, he suggests a warm body bath or hot fomentations around the trunk or if necessary five drops of spirits of chloroform in water every ten minutes. In very troublesome cases a high enema of bicarbonate of soda in warm water (gr. xx-℥j) will relieve the renal spasm.

KINNE.

Hysteria in Children. (*Journal of the American Medical Association, Vol. XXIV., No. 22.*) By Charles W. Burr, M. D.

The author records five cases of hysteria with symptoms pointing to grave nervous lesions, joint disease, etc., all in girls from seven to eleven years of age, and remarks that this affection is not confined to women alone, but may occur in either sex and at any age. The diagnosis may be very difficult and the fact should not be overlooked that there may be an accompanying organic disease.

The treatment consists of separation of the child from its parents; confinement in bed, etc., and while the cure of the specific attack is quite certain, to cure the inherent and often the inherited nervous instability requires careful education of the will and the emotions.

KINNE.

NEUROLOGY.

A Contribution to the Study of Human Neuroglia, (*The Journal of Experimental Medicine, Vol. II., No. 6, 1897.*) By E. W. Taylor, M. D.

Taylor writes a very interesting and important paper on the structure of the neuroglia based on his study of two cases of cerebral tumor. He has chiefly employed the methods of Mallory for staining the tissues. Sections from the tumor in the first case showed an abundance of fibers whose number was out of all proportion to that of the cells, and these fibres were of larger calibre than those seen in normal glia. The nuclei of the neuroglia cells, insignificant in number, were of various shapes. A few cells showed at one pole of an elongated cell-body, first of wide calibre and gradually narrowing towards its extremity, finally becoming a fibre similar in appearance to the differentiated form. These processes seemed to stand in direct relation to the cell-protoplasm and were probably undifferentiated fibres, and, therefore, transitional forms. No evi-

dence of branching of the glia fibres was found. The tumor was a glioma durum, was circumscribed and associated with extensive cyst-formation, and was situated in the basal ganglia. Taylor makes the statement—which every histologist must accept—that in speaking of sclerosis of the nervous system, the term "connective tissue" should be dropped, and that we should also avoid the use of the term "glio-sarcoma." (A number of German neurologists have recently called attention to the incorrectness of the latter term.) Taylor thinks that fibres of such numbers and density of arrangement and calibre, as were found in his first case, could hardly be processes of the few cells as were found in their midst, and that they were, therefore, differentiated from the cells. The second tumor was made up of cells of the transitional type without differentiated fibres, in Weigert's sense. The writer states, as a result of his studies, that in glioma neuroglia consists of cells with undifferentiated fibres and of cells together with differentiated fibres, the predominance of differentiated fibres depending chiefly on the age of the growth. The evolution of the neuroglia is from cells without processes to cells with processes, and then to cells whose processes have been completely differentiated into fibres. Taylor refuses to accept the distinction which Weigert makes, namely, that the glioma shows an increase of glia cells and not of glia fibres, whereas in the gliosis there is a pathological increase of neuroglia fibres. He also states that no criterion has yet been offered to determine a fundamental distinction between glioma and sarcoma.

SPILLER.

Demonstration of Various Types of Changes in the Giant Cells of the Paracentral Lobule. (*American Journal of Insanity, Vol. LIV., Nov. 2, 1897.*) By Adolph Meyer, M. D.

Meyer has examined the giant cells of the paracentral lobule by the method of Nissl in a case of degeneration from arteriosclerosis, a case of senile melancholia, a case of pressure from a hematoma, and in two cases of intoxication, one of which resembled meningitis, and the other hysterical insanity. In the case of arteriosclerosis many of the cells showed marked pigmentary degeneration, and those affected in this way were frequently found in nests together, which seemed to suggest a local disorder of nutrition. In the case of senile melancholia the changes resembled those seen in the cells of the spinal cord after the axone has been cut off at the periphery. There were reduction in size of the tigroid substance (Lenhosset's) with areas of an almost homogeneous transparent character, usually opposite the axone, general swelling of the cell body, displacement and distortion of the nucleus and accumulation of yellowish pigments. In other cells in this case the tigroid was arranged in whirlpools, such as has not been described by other writers. The nucleus in many cells formed the centre of these vortex formations

and was frequently covered by them. The same remarkable changes were found later in another case of senile melancholia. In the case of subdural hemorrhage there was dissolution of the tigroid substance into a uniform dust, and the cell body was rather deeply stained.

In the fourth case, one of delirium with convulsions in the secondary period of syphilis, the tigroid substance was granular. The nucleolus was somewhat enlarged and the nucleus had a distinctly bluish hue.

In the case with a symptom-complex allied to hysterical insanity there were granulation of the tigroid substance, swelling of the cell body and slight dislocation of the nucleus.

SPILLER.

PATHOLOGY.

Sudan III. as a Selective Stain for Fat. (*Deutsches Archiv f. Klin. Medicin, December 9, 1897.*) By Herman Rieder, of Munich.

Daddi, of Turin, recommended in 1896 the coloring material Sudan III. as a substance which would stain fat a fine scarlet to reddish-brown. This experimenter fed young animals on oil impregnated with this stain, and when the animals were killed the fat of all the tissues was alone found to be colored, the absorption of the colored fat particles even being capable of being traced. In order to harden and fix the tissues glycerin and Müller's fluid should be used, or, what is still better, frozen sections should be prepared. Care must be taken not to dehyrate the tissues in absolute alcohol, or to clear them in bergamot oil, cedar oil, or xylol, or mount in balsam; for these purposes glycerin should be employed. The tissues other than fat can be counter-stained with hematoxylin. This method is of decided value in the determination of fatty degeneration in the parenchymatous organs, in lipemia, lipuria, chyluria; and in the examination of milk and colostrum, of excised muscular particles in progressive muscular dystrophy, of tube-casts containing fatty detritus, etc. Ninety-six per cent. alcohol is saturated with Sudan III., and the solution is filtered, this is then diluted two-thirds with equal parts of alcohol and water the solution to be tested. Sufficient coloring takes place in the course of a few minutes, and the specimen can be washed in 60–70 per cent. alcohol and the excess of fluid drawn off by means of filter paper. Fat crystals and palmitic and stearic acid are not stained with such an alcoholic solution. The coarse granules of the oxy- or eosinophile cells in the blood are not colored by this reagent, thus adding another proof to the experiments of Weiss, Posner, and others, that these granules are albuminous bodies and not fat.

CATTELL.

The Preservation of Specimens With Their Natural Color by Kaiserling's Method. (*Boston Medical and Surgical Journal, December 16, 1897.*) By William F. Whitney.

The method is simple ; the only precaution to be observed is not to put too large pieces in the preserving fluid, and to be careful to change them at the proper time. As some shrinkage is inevitable, cavities should be distended with absorbent cotton, which, of course, is to be removed when the specimens are changed. Moreover, freshness of the material adds greatly to its chance of good preservation, and soaking in water (whereby the blood coloring matter is diluted) is to avoided.

Sections should be made with a sharp knife, and the blood which may have been smeared over the surface removed by pressing (not rubbing) a dry, clean cloth upon it. They are then to be submerged entirely in the fluid, best with a layer of absorbent cotton over them. In this manner, portions of the skin, showing stab or bullet wounds, or even extensive ecchymosis, could be preserved, a little cotton being inserted to keep the edges of the wound apart. The preservation of entire large organs is hardly practicable, as careful injection of the vessels is necessary, much of which should be done before their removal from the body. Bile pigment will diffuse, and therefore the liver and jaundiced organs are the least fitted for this method.

As regards the length of time they will stand, it depends upon how fresh the substances are, and how carefully they are guarded from a bright light. They have stood the test of a year already, and it would be hardly necessary in any legal case to preserve a specimen longer than that.

The following is the method, and the specimens which are shown with this enabled the members to judge for themselves how successful it has been in his hands :

Slices of organs, from three to five centimetres thick, are placed from three to five days in—

Formalin	200 c. c.
Water	1,000 c. c.
Nitrate of potash	15 gm.
Acetate of potash	30 gm.

They are then removed, the fluid allowed to drain off and the specimens are placed in—

Alcohol 80 per cent. for six hours, then
Alcohol 95 per cent. for two hours.

From this directly into—

Water	2,000
Acetate of potash	200
Glycerine	400

for permanent preservation in a dark place.

CUTANEOUS AND VENEREAL DISEASES.

Operation in Some Cases of Tertiary Syphilis. (*British Medical Journal, November 27th, 1897, P. 1571.*) By H. Watson Cheyne, F. R. C. S., F. R. S.

In this article the author points out "that in certain obstinate cases of tertiary syphilis of skin and of bones, much benefit may be gained from surgical intervention with the view of removing the local lesion as is done in cases of tuberculosis." Two cases are reported. The first narrates the history of a man of 40, who had a serpiginous ulceration of the cheek for a number of years. Vigorous anti-syphilitic treatment prolonged over a long period, resulted only in temporary improvement. The ulcerated patch, which was about the size of a florin, was excised and the gap filled up by plastic operation. The wound healed and the disease had not recurred some years later when last seen. The tissue was examined microscopically, and tuberculosis and epithelioma were excluded.

The second case was that of a wowan who had had a miscarriage had borne a syphilitic infant. Upon the extensor surfaces of both forearms she had numerous "punched-out ulcers" and "extensive red, raised, brawny patches." Several authorities concurred in the diagnosis of syphilis. The lesions resisted the free use of mercury and the iodides, although they did temporarily respond to treatment. The ulcers upon the two forearms were successively excised, the surfaces being covered by Thiersch's skin-grafts. Healing resulted at the end of three weeks, since which time the patient has remained well.

SCHAMBERG.

The Treatment of Gonorrhea With a New Silver Preparation, Protargal: Prolonged Injection. (*Dermatologisches Centrallblatt, October, 1897.*) By Prof. A. Neisser (Breslau).

Protargal is a silver-protein compound containing 8.3 per cent. of the metal. It has the peculiar property that it is not precipitated by albumen, or diluted hydrochloric acid. This property is of importance, inasmuch as it permits of a greater penetration into the tissues than can be obtained with the other silver salts.

Prof. Neisser looks upon protargal as a valuable preparation in the treatment of gonorrhea. He has never had such uniform, good, sure, and even rapid results as since the use of this medicament. He begins with a 0.25 per cent solution and increases rapidly to 0.50–1.00 per cent. concentration. The injection is to be used thrice daily, the fluid being retained the first two times for five minutes and the third time for thirty minutes. The author lays stress upon the value of prolonged injection.

SCHAMBERG.

LEGAL MEDICINE.

Legal Responsibility of Partners in the Practice of Medicine.

A physician entering into a partnership with other physicians for the practice of medicine renders himself liable for the malpractice or professional negligences of the other members of the firm. The case of Byrne (1) 23 S. Car. 226 vs. Marvin (2) is one in which the law applicable to partnerships of this sort is clearly set forth. This was an action by the plaintiff, B., against J. M. and C. M., father and son, and partners in the practice of medicine, for the recover damages for negligence and unskillful conduct in the setting and treatment of the plaintiff's broken arm.

The testimony shows that the arm was set on the night of December 6, 18— by Dr. M., the son, who visited the patient again the next day, but afterwards until December 10, when sent for, and again the next day, when he took his father, Dr. J. M., with him, who, then, for the first time, saw the patient. The negligence alleged was the treatment of the plaintiff's arm by the younger Dr. M., before his father was called in, and in the failure to visit the patient between the 7th and 10th of December.

The testimony for the plaintiff tended to show negligence by Dr. C. M on these occasions ; while the testimony for the defendant tended to show that the surgeon had done all that approved practice required. There was a verdict for the plaintiff for $1,000. Among errors assigned on appeal to the Supreme Court was an objection to the charge of the trial judge, and the portion of the charge excepted was as follows :

The Court charged the jury "that when two gentlemen associate themselves together in the practice of medicine or law or any other scientific profession, each becomes surety for the other that he will faithfully and properly perform his engagements. And if either fails to display reasonable care, diligence, and skill in the performance of his duties, both are liable." He further said, "that if the jury believed the plaintiff and his witness as they testified on the point of the setting of the arm by Dr. C. M., and the plaintiff's complaint at the time that the bandages were too tight, the great swelling of the arm and the discoloration of the fingers the next day, the earnest request of the plaintiff and his wife to him to loosen the bandages, his refusal and leaving the patient in this condition, and not returning for several days, when mortification had ensued in consequence, then this made out a case of wanton injury, in which the defendant, Dr. C. M., alone would be liable."

Upon the principles of law thus laid down the Supreme Court, in an opinion by Mr. Chief Justice Simpson, said : "When these two portions of the charge are considered together, the law laid down by the trial Judge seems to have been this, that when two or more physicians are practicing their profession in partnership, reasonable care, diligence,

and skill on the part of each in the performance of their duties is guaranteed by each and all of them, and if either fails to exercise such reasonable care, diligence, and skill in the management of a case intrusted to his care, resulting in damages, all will be responsible. If, however, a wanton case of mismanagement to made out against one alone, and damage result from this, the others would not be responsible. Was this error? Certainly not such an error, if any, as to give cause of complaint to either of the defendants. It did no harm to the younger Dr. M., and it opened a door of escape for the elder Dr. M., to which, according to strict law, it may be, he was not entitled.

"The law applicable to such cases, as we understand it, is the same as that which obtains in the general doctrine of any; it applies, too, in the relation of master and servant and like cases. It is this: In a partnership the parties associated are, in a sense, agents of each other, and the act of one within the scope of the partnership or business is the act of each and all, as fully so as if each was present and participating in all that is done. And each guarantees that within the scope of the common business, reasonable care, diligence, and skill shall be displayed by the one in charge. Or at least that a failure in law of each and all, and in injury resulting from such failure is the act of all. Where, however, the injury results from a wanton or wilful act of one of the parties committed outside of the agency or common business, and not from negligence or the failure to bestow reasonable care, diligence, and skill within the agency, then a different principle applies, to-wit: that the party doing the act and causing the injury is alone responsible—the distinction between the two cases growing out of the fact that the relation which the party doing the act bears to the others, is different in the one case from the other. In the first his act being within the scope of the business, he acts both for himself and as agent of the others; in the other his act, being beyond and outside of the scope of the business, he acts for himself.

"It will be observed, then, that two things are necessary to make the principal responsible for the acts of his agent, under the doctrine of *respondeat superior*, and the same doctrine applies to partnerships of the character under discussion. First, there must be negligence, or want of reasonable care, diligence, and skill; and, second, an injury must result from this. If either of these is absent, no responsibility attaches to any one, because it requires the presence of both to give rise to a cause of action. Now, an injury in a special case may be the result of an omission on the part of the agent or the party in charge to bestow proper care in doing what he is authorized and attempting to do. Or it may be produced by a direct act on his part within the scope of the business, which act reasonable care and the possession of reasonable skill would have forbidden. Or it may be produced by an act altogether outside of the business, and not calculated to further and advance said business. In

the first two classes of cases the principal is liable, because here is negligence, the want of proper care within the scope of the business, and resulting in injury. And it makes no difference whether this negligence sults from inattention, incompetency, or wantonness. But in the last class of cases, where the party causing the injury has stepped beyond the agency or common business, and committed an act, either from wantonness or other motive, the act is his, and he alone can be made responsible. The charge of the Judge is possibly susceptible of the construction that a wanton act of one partner, even within the scope of the business, would relieve the other parties, as he pointed out no distinction between such an act done within and one done without. But if this be so, yet, as we have said above, neither of the defendants could complain for the reason given above.

"The appellant, complains, however, of the use of the word 'surety' by the Judge. It is true, as argued by appellant, that the precise term has not been employed in any of the cases involving the relation of partners to each other or in the elementary books on the subject, but we see no error in its use here. It certainly did not intensify, or make more rigid or binding, the responsibility of partners, growing out of partnerships, than if it had been omitted. In fact, its tendency was rather to modify that responsibility, as sureties on a note might possibly be released sometimes when partners would not be." And, in accordance with the principles of law thus clearly expressed, the judgment of the trial court, entered on the verdict of the jury mulcting the partnership in $1,000 damages for the negligence of one of its members, was affirmed.

L. D. BULLETTE.

PRACTICAL NOTES.

The Treatment of Boils.—

L. Duncan Bulkley, in the *Clinical Review*, says that the objects aimed at by the treatment are: Soothing and protecting an inflamed area, exclusion of air, and a slight antiseptic action. For this purpose a moderately thick layer of absorbent cotton is taken, several times the size of the inflamed surface; for a medium-sized boil a piece one by two inches, with the fibres running the long way. Upon the centre or the cotton a considerable mass of the following oinment is spread by means of spatula, and this is then laid over the boil, and held in place by strips of adhesive plaster across the ends, but not passing over the boil:

℞ Carbolic acid, 5 to 10 grains.
Fluid extract, ergot, 1 to 2 drachms.
Powdered starch, 2 drachms.
Zinc oxide, 2 drachms.
Rose-water ointment, 8 drachms.

The relief often given by this dressing is very marked : the ointment soothes and protects the irritated surface, while the layers of cotton take up any outside friction. If comfortable, and unless disturbed, this dressing remains untouched twelve or more hours, when it is removed and a freshly spread piece immediately reapplied. If there has been any discharge the surface may be very gently cleansed with absorbent cotton, but he does not allow any squeezing. In many instances, with proper internal and general treatment the boil aborts, and subsides without discharging ; when this does not happen it ruptures spontaneously in a relatively short time, and it is not necessary to incise it. This treatment is used in all stages of boils, keeping the ointment on until the boil is quite healed. If other boils form it should be applied early, and by this means they are frequently aborted.

The Abortive Treatment of Influenza With Calomel.—

According to the *Presse médicale*, this treatment, which is recommended by Felsenthal, is very simple and consists in the systematic administration of calomel (*Revue médicale*, December 8th.) An experience during the first epidemic of influenza showed notably that calomel administered before the third day after the onset of the disease cut it short and checkened the appearance of the ordinary complications of epidemic influenza.

The treatment is carried out by Felsenthal in the following manner : In all cases in which he sees the patient before the third day after the onset of the disease he begins by giving calomel ; three grains in two doses to men, two and a half grains in three doses to women, and to children fifteen one-hundredths of a grain for every year of their age, A very rapid amelioration follows the administration of this drug. From six to ten hours afterward the very high temperature falls, the cephalalgia and the pain in the back diminish or completely disappear, the cough ceases, convalescence takes place, and the patient is completely cured, more frequently at the end of two or three days. There remains only a slight anorexia which is easily overcome by the administration of some bitters. In the large majority of cases the calomel is sufficient to bring recovery. In certain cases, as adjuvants only Felsenthal employs moist bandages around the thorax if there is not a decided fall of the fever; analgetics, such as antipyrine and phenacetine, if the pains persists ; and sodium iodide if inflammatory symptoms pertaining to the respiratory tract exist. To men Felsenthal is in the habit of giving, at the same time with the calomel, hot whisky or hot wine, in order to provoke abundant sweating.—*The New York Medical Journal.*

Local Applications of Hydrochloric Acid in Sciatica. Gennatas (*Therap. Woch., November 7, 1897,*), reports a series of twelve cases of sciatica treated by painting the painful spot with pure hydrochloric acid, two to four coats being used. The only disadvantages are smarting at

first and the formation of blisters. Gennatas cautions against retouching the blisters at the second application after twenty-four or forty-eight hours. The pain is relieved immediately, and a cure is effected in about two weeks.

The Treatment of Whooping-Cough (*Centralbl. f. Kinderheilk., 1897, ii, 43* Naegeli-Akerblom,) calls attention to an old and nearly obselete remedy remedy for whooping-cough, namely, coccionella, which in 1853 was designated by Oesterlein as a harmless resurrected remedy. He treated about eighty cases with this drug with excellent results ; the disease disappeared totally within six to eight days.

The following was the formula :

℞	Coccionellæ subt. pulv.	0.05 to 0.20
	Ammonii carbonici	1.0 to 2.0
	Syrup aurant	20.0
	Aq. destillatæ, q. s. *ad.*	100.0

Shake.—A teaspoonful every two hours.

The mixture is undoubtedly more agreeable to children than quinine or antipyrine. Ammonuim carbonate alone exerted no remedial influence on whooping-cough ; coccionella on the other hand was exhibited successfully. In cases of bronchial asthma of adults, where all other remedies failed, it was found useful.—*Pediatrics.*

A New and Delicate Test for Urine is described by Carres in the *Journal des Sciences Médicales de Lille.* It consists in putting into a small tube with water an amount of resorcin equal to one-third of the water in the tube. When dissolved the urine is allowed to flow gently along the tube wall down to the resorcin solution, when a ring of albumin is formed, if albumin be present. Though some other urinary constituents give the same ring yet this disappears on boiling, while an albuminous ring persists. The test is very delicate, experiments showing that it reveals albumin where nitric acid has failed.—*Medical Review of Reviews..*

Bunion.—Parker Syms, of New York, makes an incision about an inch in length on the dorsum of the toe. In a mild case, after retracting the tendon of the extensor proprius pollicis outward, he chisels off all the overprominent portion of the inner side of the head of the metatarsal bone, removing as much bone as is necessary to do away with all protuberance ; he then sutures the wound and lets it heal under one dressing. Usually the patient can walk about after the first week.

In severe cases, where there is a marked adduction as well as lateral dislocation, Syms removes the head of the metatarsal with a chisel or bone-forceps, and also cuts off the prominent inner side of that bone. To resect the head of the metatarsal bone it will be necessary to divide the

lateral ligaments and completely dislocate the straight incision described. It is necessary to remove so much bone that the toes will readily come into place and have no tendency to displacement. If this is not accomplished by the first ablation more bone must be removed.

The dressing must be carefully done and close attention to the after-treatment, which should include the application of a plaster splint. The writer advises never to operate during an acute attack of inflammation; always to treat the deformity, and never operate on the bursa, for it will take care of itself after its cause is removed (the exceptions to this rule are the removal of callosities from the bursa when they exist, and the incision of bursæ when they suppurate); never to make the incision around or through the bursa.—*New York Medical Journal, October 2, 1897.*

Menthoxol, Camphoroxol, and Naphthoxol in the Treatment of Wounds.—These substances are described by Wagner, of Berlin (*Deutsche medicinische Wochenschrift, 1897, No. 44; Therapeutische Wochenschrift, November 27, 1897*), as mixtures of one per cent. of camphor or menthol or two per cent. of naphthol and a three per cent. solution of hydrogen peroxide. In the camphor preparation thirty-two per cent. of alcohol is added, and in each of the others thirty-eight per cent. Any one of these three solutions, undiluted, will kill anthrax spores within three hours, although their individual constituents do not possess this property. They are all easy of preservation. In ten per cent. solution, they have been used in two hundred surgical cases, applied on sterilized gauze. The contact of menthoxol with the secretion of a wound gave rise to a development of gas that caused free effervescence. Cases of phlegmon, perityphlitis, and abscess were treated. After incision and disinfection, the dressing was generally allowed to remain in place for two days. The wounds rapidly ceased to be foul and suppurrtion grew less. Camphoroxol was found to be particularly serviceable in mastitis; in other affections no essential difference was observed in the action of the three solutions. They are all deodorizers and have an agreeable odor themselves. They have not been observed to act as irritants.—*New York Medical Journal.*

Methylene-Blue in the Treatment of Spermatic Neuralgia Dr. J. Domino has succeeded in rapidly curing three cases of neuralgia of the spermatic plexus by the internal administration of methylene-blue. In the first case, the neuralgia had existed for two weeks, the pain being so acute that morphine injections only gave a very few hours' rest. The necessity of castration had already been discussed, when it occurred to Dr. Domino to try the administration of 10 ctg. of methylene-blue every other hour. The pain was already better after the third dose, and disappeared entirely after the fifth. On the following day the patient was

able to resume his ordinary occupations. He had taken altogether 1.2 grams (18 gr.) of methylene-blue and never suffered any relapse. In the other two cases the neuralgia was not so severe as in the first case. It rapidly yielded under the use of methylene-blue, and did not recur in either case. The drug determined no ill effect, except ephemeral dysuria on one occasion.—*American Medico-Surgical Bulletin.*

Palpitation of the Heart. Huchard (*Wien. Med. Blät., July 15, 1897,*), for the purpose of treatment, divides cases of palpitation of the heart into those varieties which are, and those which are not, benefited by cardiac stimulants. Those cases arising from the ingestion of poisons, coffee, tobacco, and drugs, such as sulphate of quinin, are usually relieved by a removal of the cause. Palpitation due to gastro-intestinal disturbance, usually occurs at night, and is associated with dyspepsia and hyperacidity. For the most part these attacks may be cured by large doses of alkalies, and regulation of the diet. Iron, if taken in too large quantities, may also produce palpitation.

There is no necessary connection between cardiac palpitation and cardiac disease. The diseases usually accompanied by palpitation, and which are improved by digitalis and similar remedies are beginning aortitis, acute endocarditis and pericarditis, adhesions of the pericardium, and mitral insufficiency. In such cases the following prescription will often be found useful:

Quiniæ hydrobrom.	gr. ix
Digitalis	gr. xxx
Ext. convallariæ	gr. xxx

M. Ft. pil. No. xl. Sig. Two or four pills daily.

—(*Medical News.*)

Pruritus Vulvæ.—Herman, in the *British Medical Journal, November 20, 1897,* divides the cases of pruritus vulvæ into five classes: (1) Adventitious, due to pediculi, dirt, worms, pessaries; (2) skin diseases—eczema, herpes, furuncle, follicular, urticarial and diabetic dermatitis; (3) irritating discharges—gonorrhea, cancer, senile endometritis, and also cases where no visible discharge was seen; (4) venous congestion due to heart, lung, or liver disease; (5) nervous. Treatment: Class 1—White precipitate ointment for pediculi; absolute cleanliness and changing of material of pessaries. Class 2—Eczema usually affected fat elderly women and those pregnant; possibly it depended on a parasitic micro-organism; in diabetes it was especially frequent. In the former warm hip baths, with liquor carbonis detergens (Wright's) added, and powdering the parts with boric acid. In the latter, general treatment was required. Herpes zoster was not amenable to treatment. Follicular pruritus was best treated by squeezing out the contents of the follicles and applying corrosive sublimate 1 to 2,000. Urticaria was very rare. Class 3—Sedative and antiseptic washes to the vagina, with sedative

powders to the vulva, as a saturated solution of borax and dermatol powder and boric acid. When these fail, a strong carbolic lotion 1 to 7. Class 4 —The treatment is the same as just given, together with general treatment. Class 5—Pruritus in aged women was sometimes a symptom of degenerative changes in the nervous system, and treatment usually failed.—*Albany Medical Annals.*

Compound Tincture of Benzoin in the Treatment of Typhoid Fever, With Excessive Fever.—Potter gives five minims, in water, every two hours at first, and, if the diarrhea does not decrease in twelve hours, he doubles the dose. He has observed benefit in all cases by the end of twenty-four hours—the diarrhea decreases, he says, the stools are not so offensive, the temperature is decidedly lowered, and the patient feels very much more comfortable. He thinks the drug act as an antiseptic, as a protective to the intestinal mucous membrane, and as an antipyretic. —*British Medical Journal.*

Hysteria as a Mark for Perityphlitis.—Rendue (*Gazette des Hôpitaux*) alludes to two cases in which the signs of perityphlitis were so counterfeited that an operation was deemed essential for the diagnosis. In one the mimicry persisted after the abdominal section, in the other it did not. He declares against an operation where there is no fever irrespective of other signs. This may be a point well taken.

Bisulphite of Sodium as a Lead Eliminator.—Peyron (*Centralbl. für innere Medicin, 1897, 42,*) claims that a daily dose of 5 or 6 grains of the sodii bisulphite in lead-poisoning with traces only in the urine, will eliminate as much as 72 mg. in a day. This remedy acts very rapidly, as the maximum excretion of lead occurred two or three hours after its ingestion.

—*Journal of the American Medical Association.*

Treatment of Vomiting During the Course of Intestinal Affections.

Menthol	50 centigrams
Cognac	40 grains
Laundanum	10 grains

S. Take 20 drops several times a day.

—Pick.

Treatment of the Pains of Gangrene.—Camescasse has obtained relief from the pains of gangrene of the extremities, when all other remedies failed, by the application of salicylic acid in a 10 per cent. pomade.

Anemia and Chlorosis.—

Ferratin	225 grains
Sodium bicarbonate	135 grains
White sugar	225 grains

M. Divide into thirty powders. S.: A powder three times a day, in a glass of sweetened water. This is for persons fifteen years old or older. The dose for a child between five and fifteen years is half a powder, and that for children under five years old is a quarter of a powder.

—*Archives of Pediatrics.*

Asthma.— For the relief of the asthmatic paroxysm Dr. S. Solis-Cohen recommends :

Morphin sulphate, ⅛ to ¼ grain.
Strychnin sulphate, 1-60 to 1-40 grain.
Hyoscin hydrobromate, 1-200 grain.

Given hypodermatically at bedtime. In some cases its repetition is unnecessary. In other cases, after two or three injections, complete relief from the attack has been observed.—*Philadelphia Polyclinic.*

An Intestinal Antiseptic Mixture.—According to the *Indépendence Médicale* the following formula is advised by de Maximovitch :

Naphthol	45 grains
Chloroform	15 drops
Castor oil	1,500 grains
Essence of Peppermint	5 drops

M. Dose, a tablespoonful (for children, a teaspoonful) in port wine, beer, or hot and sweetened black coffee.

—*New York Medical Journal.*

An Excellent Vermifuge for Children.—

Benzonaphthol, Santonicæ aa	gr. xxx
Sacchr. alb.	gr. cxx

M. Div. in chart. No. XX. Sig. Two to five powders daily.

Medical News.

For Influenza.—

Quininæ sulphatis	
Pulv. ipecac. et opii aa	gr. iii
Camphoris monobrom.	gr. i

M. Et mitte capsuli tales xii.

Sig.: One capsule every three or four hours : "To overcome the languor and debility, which are marked, nothing is so successful as strychnine."

—Anders.

Gastro-Intestinal Catarrh in Infants.—Dr. Wells advises the following for its quieting effect :

Sulphonal	gm. 0.5
Sodii bromid	gm. 2.0
Spts. menth. pip.	gm. 10.0
Aquæ Camphorae q. s. ad.	gm. 60.0

Sig.: Teaspoonful every 2 to 3 hours.

—*Philadelphia Polyclinic.*

INTERNATIONAL MEDICAL MAGAZINE

An Illustrated Monthly of Medical and Surgical Science.

Edited by
WALTER L. PYLE, A. M., M. D.

Contributions of original articles, clinical memoranda, and other matter of interest to the Medical Profession, are solicited from all parts of the world. Illustrated papers are especially desired. Extensive communications must be type-written. Contributors will be furnished with a liberal number of covered reprints as compensation, provided a request for same accompanies their manuscript.

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PHILADELPHIA, JANUARY, 1898.

Notice of Change. Commencing with this issue, the INTERNATIONAL MEDICAL MAGAZINE will be edited by Walter L. Pyle, A. M., M. D., and published by THE INTERNATIONAL PUBLISHING COMPANY, OF PHILADELPHIA, PA. A full prospectus of the MAGAZINE, for 1898, will be found on pages 8 and 9 of the advertising columns.

"Faith-Curists." THE great characteristic American respect for personal liberty and freedom of individual thought and speech, explains the reason why the so-called "faith-curists," "mind-curists," "Christian scientists," etc., are permitted to exist and thrive. It is furtherest from our intention to interfere with any man's right to believe or practice any creed, dogma, or pseudo-science that he pleases, we would brook no such interference ourselves, but when persistence therein is unmistakably dangerous to his life, we contend that a man is no longer a responsible citizen, and that the guardiancy of the law is indicated. When he endangers the health of the community he should be straightway checked, and summarily dealt with by way of example.

After the death recently, in Camden, N. J., of a two-year-old child, unquestionably of diphtheria, it was found that the parents had not procured any medical advice, but had relied on the services of a "faith-physician," of whom they were devoted disciples. The coroner very properly refused to sign the death-certificate, and referred the case to

the county officials for autopsy and to fix the responsibility. The "physician" in this case signs himself C. S. (Christian Scientist), and occupies elaborate offices in the best location in Philadelphia. It has since been learned that another infant treated by the same man died of what was proven to be pneumonia. No medicines were administered as "Christian Science recognizes no diseases and therefore, no remedies for bodily ills." When pressed to explain how a sick infant could be cured by the faith of other persons, this physician said that even an infant was unconsciously influenced by false ideas of what disease was, and that the truth could reach and cure it through older persons.

If adults desire to be cured by "faith," it may or may not be their affair, according to the danger of their disease. It is supposed that they are in full possession of their mental discrimination; but to attempt to cure a two-year-old infant, ill with a highly infectious disease, the non-recognition of which threatens a number of other lives, by "faith" and "mental strength," is an outlandish and criminal absurdity. There ought to be some speedy way of bringing such preposterous fools to justice.

We do not desire to convey the idea that to practice "faith-cure" is a crime; we simply define what we believe to be its legal limitations. We are also conscious of the fact that sometimes the "curists" are the victims and not the dupes of a scoundrel. It is not uncommon for charlatans, seeing a chance for profit, without investigating or acquiring a knowledge of the principles of the new "cure," to draw its sectarian cloak about them, hoping to acquire some respectability and protection in their new guise. The silly cant and twaddle about "personal and religious liberty," "truth will prevail," "the tyranny of science," etc., is used by all sorts of uneducated quacks to prevent the enforcement of right and just laws, and, sad to say, with a remarkable degree of success. The essential object of law-making is for individual and social protection. By the experience of years of scientific investigation and careful legislation, it has been deemed wise to pass certain laws acknowledging the necessity of a knowledge of the established medical science in the treatment of disease and in the regulation of the sanitary affairs of the community, with the greatest effrontery and impudence, certain bodies of people claiming to be advocates of new and improved theories of treatment, demand a right to advertise and practice the cure of disease without legal qualification.

If our laws are to be so distorted and handicapped by foolish sentiment that their purpose is thwarted, we might as well spare ourselves the trouble and expense of ever making them. This is evidently the view of Judge Pennypacker, of Philadelphia, who, in refusing to grant a charter to the First Church of Christian Science, delivers an important ruling as to reasons why the incorporation of a church having "faith-cure" for one of its tenets is contrary to the laws of Pennsylvania. Judge Pennypacker says:

"It is quite clear that what is proposed is much more than a church, since there is besides to be established a system for the treatment of disease to be carried into effect by persons trained for the purpose who may receive compensation for their service.

"The act of March 24, 1877, provides: 'It shall be unlawful after the passage of this act for any person to announce himself or herself as a practitioner of medicine, surgery, or obstetrics, or to practice the same, who has not received in a regular manner a diploma from a chartered medical school, duly authorized to confer upon its alumni the degree of doctor of medicine,' and a violiation of the act is made punishable as a misdemeanor, with a fine of from $200 to $400 for each offence.

"The object of this act is to provide that for the practice of an art so difficult and abtruse as the treatment of disease, the persons so employed must have had the benefit of the learning and experience of the past so far as it can be given by teaching in the medical schools. It establishes a policy for the Commonwealth which the courts must be careful not to thwart. To grant this charter would be to sanction a system of dealing with disease totally at variance with any contemplated by the act of 1877, different from any taught in a chartered medical school. It is possible that the method proposed is correct, but the most important of truths which run contrary to long-established and popular currents of thought must ever pass through a period of test and trial before they are accepted."

Finger-Prints.

In the whirl of a daily murder cases and the daily round of guesses and doubts concerning them, the subject of the detection of crime by finger-prints has excited widespread attention. The reading public were already educated by the great American humorist in his story of Puddin-head Wilson, and knew pretty much what to expect, but many a one can't help asking what would have happened in a recent case, had the marks coincided with those experimentally made by any known man's fingers. Are we just now prepared to say that there may not be two people who made identical marks—marks, so far as observation with lens and camera show, exactly identical?

On general principles, we say that no two people are exactly alike, but think of the many points they have to differ in? And there have been cases of very confused identity. But to decide identity by one feature, as it were, how very hazardous! Take noses for instance. One can find quite readily two noses practically alike. Would it do to condemn a man to severe penalty in a case where only the culprit's *nose* had been seen, and even photographed, because his nose were the exact image of the one taken by the camera?

Evidently the dictum that finger-prints of different individuals always recognizably differ cannot be accepted until the finger-prints of all have been taken and studied. Then there is the question of the varying impression of the same hand under different circumstances of heat and cold, pressure, cleaniness, and dirt. Perhaps we may come before long to the plan of requiring finger-prints from every citizen, and have them kept for reference, not in a rogue's gallery, but in some special and spacious building devoted to the purpose, all indexed and arranged, so that on meeting a suspicious mark of a certain character, the custodian will turn with certainty to known books holding all the imprints of that character in the community. The old way of pressing a thumb on sealing-wax, and the ink-mark of a thumb on documents was not so bad after all.

In such a state of things as we have imagined the question of gloves would become very important ; every one, for privacy and security would wear them. The murderer would look to them in his preparation, as well as to his black-jack, sand-bag, or revolver, and after the deed was done he would have an added danger in disposing of them. Perhaps there might be made and widely advertised a murderer's paste, or a burglar's enamel, sure to fill up the tell-tale hollows between the tell-tale ridges. The whole of criminal law would be revolutionized. Those who were timid and feared the midnight robber, or the bank that would detect the invader of its safe, would leave door-knobs around everywhere and sensitive surfaces that would take an imprint at a touch. The maiden who contemplated bringing action for breach of promise, surrounded though she might be with automatic cameras, and the cylinders of her phonograph already revolving, would clinch the unfortunate who tried to gain her hand by wearing a glove so sensitized that the impression of his trembling fingers would be left upon it, and show forever the reality and intensity of the passion which agitated his breast. Studies, too, of many millions of prints by trained experts would lead, as in a sort of new palmistry, to the detection of the criminal finger, by its markings, and even the discernment of the different grades and kind of guilt. The occupation of a life-time, the coming career best fitted for us, might be thus foretold ; in short, here is an endless field, the rival of bacteriology, whose devotees may yet divide with the State Biologist the emoluments of place and power. But the poor non-expert, the simple possessor of hands and fingers, for him will remain only more complications in living, only more careful avoidance of everythihg, and an ever growing mindfulness of the meaning of touch not, taste not, handle not, in a far wider sense than ever dawned upon the Woman's Christian Temperance Union.

EDWARD WILLARD WATSON.

The Moral Effect of the Theatrical and Pictorial Representation of Crime.

In the *Lancet, October 2, 1897*, under the caption of "Morals and the Stage" there is quoted Sir Henry Irving's remarks at a complimentary dinner at Cardiff: "How many wives had owed a violent death to the pernicious example of Shakespeare's *Othello*?"

In comment upon the foregoing there was expressed a doubt as to whether crime was ever prompted by either a poster or a stage representation. This latter statement provoked the following interesting letter from Dr. Mac Kern, a Buenos Ayres correspondent:

"While I agree with you as to posters, which produce a mere passing impression, and are therefore as highly colored as possible with that object in view, I think that a stage representation is a very different thing and in the case of tragedies the more powerful the play the more is the attention fixed and the more likely are the mental images to remain deeply impressed in the brain of the spectator.

"Some years ago I had to do with a case of murder, where the idea of strangulation was directly prompted by a theatrical representation of *Othello*. It was the case of a young Italian, who insured the life of his servant to his own benefit, and after waiting a couple of months smothered him in his bed one night. At his trial the criminal calmly remarked that he had lately seen (*twice* he actually went, probably with the object of perfecting his method) the opera of *Othello*, and that he "only did to the young man what Othello did to Desdemona," and he also confessed that in the very act of smothering his victim "the scene in the theatre was vividly before him as it was before him now." ("*Tuve y tengo presente lo que hizo Otello con Desdemona*" is what he actually said in Spanish). There is no doubt that in this case the crime of strangulation was directly suggested to the would-be murderer by a stage representation of *Othello*. This is one case at any rate for Sir Henry Irving to ponder over. The whole case of this Italian was especially rich in medico-legal interest, but I must not encroach any more on your valuable space."

There seems but little doubt to us that such cases are quite frequent, and careful questioning of imprisoned murderers would elicit many analogous instances.

A Wail from South Africa.

According to the *Practitioner*, within the last few years there has been an afflux of doctors to South Africa, altogether out of proportion to the population. It is mournfully added that the social atmosphere of this region is anything but conducive to ethical development. To be successful the South African doctor must stand treat treat for liquors promiscuously, must take a hand at billiards with all the town loafers, and, to cap the climax, it is said that "if he goes in a little for racing, so much the bet-

ter ; and if he gets drunk once a week, his reputation is made." Those of us who have been pleasantly reminded by our Transatlantic colleagues of the extraordinary lack of professional dignity and scientific culture among our medical brethren in the newly settled districts of the "States," take consolation in such news as this from British Africa, and, if we are addicted to expressive slang, say to ourselves with a sigh of relief—"there are others!"

British Medical Titles.

There seems to be a distinct lack of understanding, even in Great Britain, as to which class should be called *doctor* and which should be called *surgeon*. In answer to a recent correspondent, the editor of the *Lancet* says: "A Bachelor of Surgery is a *surgeon* by right: a Bachelor of Medicine has been styled a *doctor* by courtesy and long-established custom, probably because the gap between his positiou and the position of Doctor of Medicine has been very small, although the modern tendency is to widen it. A diplomate of a corporation cannot make his *membership* or *license* carry the title of *Doctor*. The trouble arises, as we have so often pointed out, from the fact that the public use as a popular title for a medical man the academic title which happens to pertain to one group of medical men."

BOOK-REVIEWS.

LECTURES ON THE ACTION OF MEDICINES, being the Course of Lectures on Pharmacology and Therapeutics delivered at St. Batrholomew's Hospital during the Summer Session of 1896. By T. Lauder Brunton, M. D., D. Sc. (Edin.), L. L. D. (Hon.) (Aberd.), F. R. S., Fellow of the Royal College of Physicians; Physician and Lecturer on Pharmacology and Therapeutics, St. Bartholomew's Hospital. New York. The Macmillan Company, 1897. Price in cloth, $4. pp. 673.

Judging from the verbatim report constituting the volume now published Dr. Brunton must be a most entertaining lecturer on therapeutics. The author states that the first course of lectures which he delivered twenty-seven years ago, was in some respects, probably the best that he has delivered. They were carefully prepared and read from manuscript ; but he then saw that he must abandon that method ; he applied himself to extemporaneous lecturing, and he has succeeded in acquiring a remarkable felicitous style. He has not attempted to crowd into each lecture as much information as could be given, but has adapted himself to the capacity of his hearers, and we have no doubt they long remember his words and his vivid illustrations, whether drawn from the ancient immunity of Mithradates, or from the modern habits of the "Red Men in America." Dr. Brunton cautions his pupils against giving a large flabby man as large a dose as would be given to a man of the same height and the same breadth of shoulders, but without the same amount of fat. Dr. Brunton and Sir Joseph Fayrer have had a large experience with snake-venoms. Dr. Brunton advises the use of permanganate of potassium for dog-bites as well as snake-bites, and

attributes the discovery of the value of its use in the latter case to Dr. Wynter Blythe. We have always supposed that the credit is due to Lacerda, of Brazil.

The reader will find his conception of the action of medicines broadened, and cannot fail to derive much of practical benefit, as well as pleasure, from its perusal.

TEXT-BOOK OF PRACTICAL THERAPEUTICS, with especial reference to the application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in Jefferson Medical College, etc. With special chapters by Drs. George E. de Schwenitz, Edward Martin and Barton C. Hirst. Sixth edition, thoroughly revised and largely rewritten. In one octavo volume of 756 pages. Cloth, $3.75; leather, $4.75. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

This work is thoroughly brought up to date, and is especially valuable in connection with the author's work on practical diagnosis, which was noticed in our last issue. The description of drugs is concise, clear and conservative. Part III. is devoted to remedial measures other than drugs and foods for the sick. Part IV., on diseases, brings the subject of treatment into harmony with the foregoing portions of the book, and makes the volume a practical work of reference in which the consultant quickly finds the information he needs. The issue of six editions since 1890 speaks well for the popularity of the work.

A MANUAL OF OBSTETRICS FOR STUDENTS AND PRACTITIONERS By Professor A. Duhressen, M. D. Translated and edited from the Sixth Amended and Enlarged Edition, by John W. Taylor, F. R. C. S.; 8 vo. pp. 318, with illustrations. H. K. Lewis, London, Publisher. Price 6 s.

This small volume fulfills the object of its translators as perfectly in this country as in England, both as a guide to students and a reference book for busy practitioners. It covers the field of modern antiseptic obstetrics thoroughly and yet briefly, and emphasizes the fact that obstetrics is a surgical science, and should be practiced with equal antiseptic details. These conditions, which must be diagnosed and dealt with instantly, are given with detail, while those that may be delayed are briefly mentioned and left for larger books to elaborate,

The pathology and treatment of labor are given in full, as well as obstetric operations, including a chapter on that obstetric anomaly Vaginal Cæsarean Section. The operations are very clearly and practically described—lysol is largely recomended and antiseptic dressings are urged. Altogether the book is convenient, complete and thoroughly practical and should prove of great value to the young practitioner.

DISEASES OF THE EYE. by Edward Nettleship, F. R. C. S., Ophthalmic Surgeon at St. Thomas Hospital, London; Surgeon to the Royal London (Moorfields) Ophthalmic Hospital. Revised and edited by W. T. Holmes Spicer, M. A., M. S., F. R. C. S., Ophthalmic Surgeon to the Metropolitan Hospital and to the Victoria Hospital for Children. Fifth American from the sixth English edition. With a supplement on Color Blindness by William Thomson, M. D., Emeritus Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. Handsome 12mo. of 521 pages, with 2 colored plates and 161 engravings. Cloth, $2.25. Lea Brothers & Co., Publishers, Philadelphia and New York. 1897.

Despite the fact that the author disclaims any responsibility for the additions and corrections made by the editor—Mr. Holmes Spicer, the new sixth edition of this well known work is in many respects an improvement on any of the older editions, and Nettleship will continue to be the favorite hand-book with many practitioners and

students. Dr. William Thomson has revised his admirable section on the Detection of Color-Blindness(not colour!).

The fact that six editions of both Swanzy and Nettleship have been offered to the American market emphatically bespeaks the need of a good American hand-book on Ophthalmology. For many reasons American editions of English books on this subject inadequately express the state of the Science in this country. Particularly is this true of Refraction and Muscle-Imbalance the finer details of which are so woefully neglected by Transatlantic writers. Fame and fortune awaits the author of a thoroughly American hand-book, modelled after the two English favorites.

An Epitome of the History of Medicine. By Roswell Park, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Illustrated with portraits and engravings. One volume, royal octavo, pages xiv.-348. Extra cloth, beveled edges, $2 net. The F. A. Davis Co, Publishers, 1914 and 1916 Cherry Street, Philadelphia; 117 West Forty-Second Street, New York; 9 Lakeside Building, Chicago.

This interesting and valuable volume consists of the subject-matter of a series of lectures given in the Medical Department of the University of Buffalo, rearranged and edited for easy reading and reference.

Dr. Park first considers the medicine of antiquity, particularly among the ancient Hebrews, Egyptians, Orientals, Chinese and Greeks. The body of the book is planned after Renouard's classic arrangement into three distinct epochs:

1. The Age of Foundation, begining in mythology and ending with the death of Galen, about A. D. 200.

2. The Age of Transition, which includes the Greek period, ending with the burn, ing of the Alexandrian Library, A. D. 640, and the Arabic period, ending with the Renaissance.

3. The Age of Renovation, including the Erudite period of the fifteenth and sixteenth centuries, and finally the Reform period, to the present century.

A short History of Medicine in America, a History of Anesthesia, and a History to Dentistry are included.

The work is well written and constitutes the best comprehensive resume of the subject in our language. Several reproductions of quaint illustrations of old instrument and operations, and portraits of the most prominent figures in the development of Medical Science, enhance the value of the volume.

Songs of Flying Hours. By Dr. Edward Willard Watson. Illustrated by Agnes M. Watson. Philadelphia. Henry T. Coates & Co., Publishers.

We always note with great pleasure any extra-medical literary production from a medical practitioner. It is indeed a well-rounded man who, while working daily in such an obtruse and engrossing science, can merge from his bonds of technicality and give us such good poetry as this volume contains.

These songs from the heart, full of such true sentiment, echoing important social problems, served to us in such a delicate manner, phrased in such pleasing rhyme, and illustrated by such striking examples, make us feel the genuine spirit of poesy, and the generous heart that so throbs for its fellows. Would that there were more such socialists!

It is difficult to express a choice from the wealth of riches in the book, The most pretentious poem "The Cry of Prometheus," pleases us much; "The City's Gold" assures us that we city-bound folk are not destitute of natural pleasures; but what appeals most to our rather robust poetic mind, if we dare claim such a possession, is the initial "Poesy":

"These are the themes, wider than rolling earth,
That fill the soul with music.

The volume is appropriately illustrated by the author's talented sister, Agnes M. Watson.

MEDICAL NEWS AND MISCELLANY.

A Foreign Edition of "The Laryngoscope, is to be published by Messrs. John Wright & Co., of Bristol, England.

The Philadelphia Medical Journal.—We are pleased to note the appearance of this new weekly, under the editorship of Dr. George M. Gould, formerly editor of the *Medical News*.

The Georgia Foot-Ball Bill, which was passed almost unanimously by the Legislature of the State, has been vetoed by Governor Atkinson.

The Microbe of Rheumatism.—Triboulet, with Coyon and Zadoc, has recently verified before the *Société Médicale des Hôpitaux*, Paris, the description of Achakme and Thiroloix of the microbe of rheumatism in sterilized milk of anaerobic culture. The cultures were made from the blood of the inferior vena cava, the mitral valve, and the lumbar spinal cord of a patient, recently dead of acute articular rheumatism complicated with endocarditis, pericarditis, and chorea.

The Outbreak of Yellow Fever in New Orleans, as elsewhere, is over. We have three additional cases to report among the medical profession here: Drs. A. C. King, A. R. Choppin, and E. B. Viers, making a total of over a dozen. A death must, at the same time, be reported, that of Dr. E. B. Viers, making a total of two for the whole period. About the same number of trained nurses, as of physicians, were stricken with the disease, but without fatality. The two physicians who succumbed to the disease were young men, unacclimated, and who had lived in New Orleans only a short time.—*New Orleans Medical and Surgical Journal.*

Examination for Pension Surgeon.—The United States Civil Service Commission announces that on March 5, 1898, an examination will be held at Washington and other places throughout the United States, for the position of Pension Examining Surgeon. As a result of this examination, vacancies will be filled at Bridgeport, Conn., Lynn, Mass., Washington, Ind., and Vicksburg, Miss.

Applicants must be graduates of reputable medical colleges, and not barred by State or other laws.

The subjects of the examination are as follows: thesis, anatomy, and physiology, physical diagnosis, general and special pathology, and surgery. The subject of the thesis will be upon some common medical theme, and each competitor will be required to write not less than 250 nor more than 500 words.

Persons who are legal residents of the places where the vacancies exist will be given preference in appointment. Person desiring to enter this examination should at once write to the United States Civil Service Commission at Washington for application blanks Forms 304 and 375, which should be properly executed and promptly filled with the Commission at Washington.

No applications will be accepted after the hour of closing business on Friday, February 25.

Vivisection.—We learn that the provoking question of vivisection is again raised by the action of Cardinal Gibbons, Bishop Paret, of the Episcopal Church, and several other prominent citizens of Baltimore. These gentlemen have interested themselves actively in the formation of an anti-vivisection society, and they have drawn a severe indictment of the medical school of the Johns Hopkins University for alleged cruelties. practiced upon dumb animals. It is fortunate that, coming from such eminent sources, these charges are likely to give impetus to fresh attacks by the rabid anti-vivisectionists.

The Medical Department of the University of Chicago—.At a recent meeting of the Trustees of the University of Chicago, January 3, 1897, the affiliation of Rush Medical College, one of the pioneer medical institutions of the West, with the University, was announced, the condition being that the Trustees should not include members of the Faculty, but should be business men having no financial interest in the income of the college ; that the debt of $17,000 should be paid, and the qualifications for admittance should be gradually advanced until in 1902 they should include a Freshman and Sophomore term in a standard university.

An International Health Exposition, on a great scale, will be held at the Grand Central Palace Hotel. New York City, for five weeks, beginning April 25, 1898. Modern systems of house-heating, ventilation, plumbing, hospital and prison arrangements, sewage systems, model school-houses, and all that pertains to proper sanitation and sanitary science will be exhibited in an interesting and attractive manner.

A Hospital for the Treatment of Consumptives and persons suffering with contagious diseases is contemplated at Asheville, N. C. Mr. George W. Vanderbilt, whose generosity has made him so justly popular, proposes to donate $100,000 toward the construction of the institu-

tion, which will be, when completed, one of the finest hospitals in the South.

Christmas Inebriety in a Large City.—In referring to the large number of arrests in inebriety in Philadelphia during the Christmas holidays, a prominent daily says that Superintendent of Police Linden was unable to conceal his surprise at the large number of arrests that had been made in the interval. Several districts turned in three pages of names. An examination of these schedules showed that the greater number of the arrests came under the head of "drunkenness," "drunk and disorderly," and "drunk and breach of the peace." The total under these headings, where the prisoner's "condition" was marked "drunk" on the police station blotters at the time he was landed in a cell on December 24, 25 and 26, which were regarded as constituting the Christmas holiday, footed up 808.

The districts making the heaviest contributions to the roll were the following: Second, 42; Third, 30; Fourth, 55; Fifth, 49; Sixth, 53; Seventh, 56; Eighth, 57; Ninth, 32; Tenth, 42; Fourteenth, 40; Seventeenth, 20; Nineteenth, 40; Twentieth, 46; Twenty-sixth, 45; Reserves and Eleventh, each 25; Twenty-first, 28; Twenty-third, 29.

Superintendent Linden, after scanning the pile of reports, said he did not have the figures at hand, but he regarded this total as a record-breaker. He also said it would be a difficult thing to assign any particular cause for the heavy call upon the capacity of the police stations, whether it was due to the cold weather, the employment of more men and better times than prevailed a year ago, the consequent flushness of money, and a desire to celebrate the day, or for what reason.

Narcosis Statistics.—Gurlt, in the *Archiv für Klinische Chirurgie*, publishes the result of the narcosis statistics for 1895–6 and 1896–7. The statistics cover 61,603 cases, in which the anesthetics used were chloroform, ether, chloroform and ether mixture, Billroth's mixture, and ethyl bromide. The figures are as follows: Chloroform, 39,627 narcoses and 28 deaths; ether, 14,092 narcoses, with four deaths; ether and chloroform, 5,064 narcoses, with one death; Billroth's mixture, 996 narcoses and one death; ethyl bromide, 1,826 narcoses and no deaths—altogether 61,605 narcoses, with 34 deaths, a mortality of one in 1,811. The author then remarks on the different accidents which occurred, as follows: "*Chloroform*—Asphyxia occurred with all mixtures at times. Cramp of the glottis, necessitating tracheotomy, occurred twice. Pneumonia occurred in several cases. In two a very marked parenchymatous nephritis resulted. Deaths occurred at all ages, and though in some cases heart or chest affections were found postmortem, to account for death; in other instances no such lesions were found." *Ether*—There was nothing particularly new to note. Deaths from bronchitis and pneumonia occured as usual. The ether exanthems were noted occasionally

both in children and adults. Tremor was noted after ether in one case, and in the case of an epileptic regular convulsive seizures occurred during narcosis.

Nothing noteworthy was to be remarked concerning the mixed forms of narcosis.

The report ends with a detailed account of the cases from the different surgeons, from whose statistics Gurlt's paper was made up.—*Albany Medical Annals.*

Roentgen Rays and Army Surgery.—The *Pioneer Mail* states that the Roentgen rays are proving to be of the greatest assistance in dealing with gunshot wounds, among the troops engaged on the Indian frontier. A case is quoted where a Sepoy was struck by a bullet which passed across his chest and through the arm. Although the injuries were at first treated as flesh wounds only, inflammatory symptoms appeared, which the medical officers were at a loss to explain, as they believed the bullet had passed out through the arm. The Roentgen rays, however, disclosed a foreign body lodged in the muscles of the chest, and it was found that the bullet had apparently struck a bone and splintered. The pieces of lead having been removed, the man is believed to be on a fair way to recovery.—*Medical Times and Hospital Gazette.*

Mortality in Havana.—Some idea of the sanitary and other conditions of Havana may be had from the report of Dr. W. F. Brunner, Sanitary Inspector of the United States Marine Hospital Service, who was sent to Havana by Surgeon-General Wyman. During November the total number of deaths in the city and the suburban town of Regla was 2,317, which is equal to a death-rate of 133 to the thousand. In October in Havana the death-rate was 136.32 per thousand ; in September, 106.68 ; August, 86.34, and in July, 71.52, showing that the rate is increasing in an alarming proportion. Deaths from yellow fever in Havana have decreased, because hospitals have been established outside the city, and on account of cooler weather, but other fevers, such as enteric and malarial, have increased, and troubles such as dysentery and enteritis are very formidable. Such diseases as beri-beri and leprosy even have been discovered. Dr. Brunner reports the food as insufficient, which, of course has a direct connection with the high death-rate.

Reports from other than scientific sources show that the sanitary conditions in the smaller towns, particularly in those where, in consequence of Weyler's orders, people from the country were huddled together without shelter and food, have been simply horrible. Thousands of Spanish soldiers—how many will probably never be known—have succumbed to disease, and thousands of others have been sent back to Spain physical wrecks—men who will never again be fit for service in the field. Many of the soldiers sent in the last year to Cuba have been but little more than boys, who could not stand the hardships.

The men under Gomez, on the other hand, are natives, accustomed to the climate and open air life, able to live on fruit and vegetables. Among these, operating away from the towns, no such death-rate would be possible. So far as can be gathered, Gomez has not far from 50,000 men in the field, Spain has sent out over 200,000 men, and is no nearer success than she was two years ago. Disease, bad food, and horrible sanitary conditions are contributing powerfully with Gomez in winning freedom for Cuba.

Dr. Joseph O'Dwyer, the celebrated advocate of incubation, died in New York, January 7, 1898, after an extended illness, from tubercular meningitis.

Death of Ernest Hart.—As we are going to press, we are advised of the death of Ernest Hart, the editor of the *British Medical Journal.* Mr. Hart has long been a sufferer from diabetes.

Deaths in the Profession Abroad.—Among the members of the medical profession in foreign countries, whose deaths are recently recorded in the *British Medical Journal*, are Dr. Joachim Voss, professor of anatomy and medical jurisprudence in the University of Christiania, President and founder of the Association of Norwegian Medical Practitioners, and one of the first who performed ovariotomy in Norway, aged eighty-two ; Professor Victor Hüter, for many years lecturer on gynecology in the University of Marburg ; Dr. Nikolai Kleinenberg, professor of comparative anatomy in the University of Palermo, aged fifty-seven ; and Dr. M. A. Olivet, professor of psychiatry in the University of Geneva, and author of numerous publications on subjects relating to mental diseases, aged seventy-six. We regret also to record the deaths of the following men of science : Dr. Giacomo Sangalli, professor of pathological anatomy in the University of Pavia, and Senator of the Kingdom of Italy, aged 66 ; Dr. Franz Ritter von Schneider, professor of chemistry in the University of Vienna.

Professor Tarnier, the celebrated French obstetrician, died on November 23, from a malignant intestinal growth. The immediate cause of death was profuse intestinal hemorrhage. He was 70 years old.

Professor Mikulicz, *Deutsche medicinische Wochenscrift, June 24, 1897*, mades the following significant remark : "It is an open secret that the results of treatment of wounds have not improved since aseptic methods were substituted for antiseptic methods."

Ambassador Hay proposed the toast "The Health of the Royal Society" at the anniversary meeting of the Society in London on November 30. Lord Lister delivered the Presidential address.

The Late Dr. Thomas Evans was celebrated in the courts of Europe in other spheres than those of dentistry and diplomacy. On account of his mechanical genius in devising instruments and appliances for the

surgery of the mouth and throat, he was called in consultation in the case of the late Emperor Frederick of Germany, with whom he was on more than friendly terms. According to a writer in London *Truth*, Dr. Evans was greatly annoyed at the confidence placed in Sir Morell Mackenzie, about whose treatment he had strong views. Evans' opinion greatly influenced the opinion of the old Emperor and Empress, of Bismarck, and of the Berlin physicians, about the throat-doctor from London. Evans was originally a Quaker. The theatrical and society tastes of Sir Morell Mackenzie were repugnant to him. His feeling about them made him scrutinize keenly the man and his treatment. But the Crown Princess had a strong bias, and followed it.

Dr. Harold N. Moyer, the well-known Chicago neurologist, and the editor of *Medicine*, was held up, shot, and seriously wounded through the thigh by foot-pads. The attack was made in the early evening near the doctor's residence, on one of the principal streets of Chicago. Although the wound is not serious, it will disable him for some time. We extend our deepest sympathies, and wish him a speedy recovery.

The Oldest Minnesotan Dead.—Bazille Luprement, the oldest man in Minnesota, died on December 23, in the town of Little Falls. He was nearly 110 years old. Luprement was born at St. Constance, Quebec, in March, 1788, a year before the inauguration of George Washington as President of the United States. He was a Canadian soldier in the war of 1812. He came West in 1841. Luprement was drafted for service in the civil war, but being then seventy-five years old, he was not sent to the front.

Dr. Zakharin, the famous physician of Czar Alexander III., is dead. Dr. Zakharin before the death of Alexander III., which occurred on November 1, 1894, was accused of having made a mistaken diagnosis of the Czar's malady, negligence and lack of professional skill also being alleged. Dr. Zakharin and Professor Leyden quarreled violently over this case, each accusing the other of improperly treating the dying monarch. According to one account, the quarrel was due to the Russian physician informing the Czar of his condition, the German professor reproaching his associate with discouraging the patient, to which Dr. Zakharin replied with an angry fling at "foreign interference." Dr. Zakharin threatened to leave Livadia for Moscow, but he was forbidden by General Ticher to do so.

When the death of the Czar became known the populace of Moscow was so indignant at what was believed to be the malpractice of Dr. Zakharin that they wrecked the doctor's house, Later the medical students in St. Petersburg began a hostile demonstration against the doctor, but they were dispersed by the police.

The Cuvier Prize.—At the session of the *Academie des Sciences*, held at Paris, December 13 1897, the Cuvier prize of 1,500 francs was awarded to Professor O. C. Marsh, of Yale University. This prize is awarded every three years for the most remarkable work either on the Animal Kingdom or on Geology.

Peddlers and Eye-Glasses.—The Mayor of Buffalo, N. Y., will not permit the sale of spectacles in the streets by venders, and every license granted to a peddler bears the clause : "No eye-glasses are to be sold under this license." The Mayor very properly holds that he has the power to forbid the sale of spectacles on the ground that the eyes not being scientifically tested before the purchase, great injury might result to to the purchaser.—*Medical News.*

An Antiseptic Residence has recently been constructed at Yokohama, Japan, by Dr. W. vander Heyden, the bacteriologist. The walls are made of large blocks and slabs of glass, mounted in metal, and the whole hermetically closed. None of the windows open. A row of small opening near the ceiling of the upper story allow the egress of the air, without permitting the entrance of outer air which is exclusively supplied through a pipe extending some distance beyond the house, into into which it is forced, filtered, and sterilized by passing over glycerine. The house is entered through a long hall, and no germs can enter except those brought on the persons or clothes of the inmates. These microbes, however, find no further chance to develop, as is shown without turning rancid our sour. The space left between the glass in the walls is filled with a special saline solution which absorbs the heat of the sun and moderates the temperature within even on the hottest days, while the slow radiation of the absorbed heat and chemic processes in the solution keep the house warm at night.—*Journal 'd Hygiène, October 14.*

Peculiar Auras.—Sinkler and Pearce mention two cases of peculiar auras of epilepsy. In one case a peculiar odor of flowers ushered in the fit. Another case had an odor of some indescribable substance which was associated with a sweet taste in the mouth.

"A Famous Parisian Lady Specialist."—The following is a communication from a barrister in the, *British Medical Journal December 11, 1897 :*

"Sirs.—Who was Dr. Marion Sims? I, a layman, don't know, but I happen to have seen the other day a circular bearing the name of a chemist not unknown describing something invented by the late *Dr. Marion Sims, a famous Parisian lady Specialist.* I once heard of a man who took Marion Crawford down to dinner and found her a most charming and accomplished lady. If this is a parallel case it might amuse your readers to hear of it."

German Commercialism.—The Berlin *Post* says that the establishment having exclusive rights to manufacture Behring's antitoxin pays him a monthly royalty of $17,500. *Figaro* quotes these figures, and observes that Dr. Roux, Assistant Director of the Pasteur Institute, in Paris, does not profit at all from his discovery.

Russian Lepers.—Dr. W. Grebentschikoff reports that the total number of lepers in the Russian Empire from May, 1895, to May, 1897, was 1,200. Of these, 633 were males and 567 females.

Tubercle Baccilli in a Cigar.—Dr. J. C. Spencer, bacteriologist of the Board of Health of San Francisco, Cal., reports that he discovered tubercle bacilli in a cigar made in China.

The Wise Doctor.—"But, my dear sir, you positively must follow my directions. You must take an ice-cold bath every morning."

"Why, doctor, that's just what I am doing."

"Oh—er—well, then you must stop it."—*Fliegende Blätter.*

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ORIGINAL COMMUNICATIONS.

KNIFE-BLADE WOUNDS OF THE SKULL

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In a paper read before the Philadelphia Academy of Surgery, at its meeting in April, 1891, and which has never been published, I gave a short account of 29 cases of knife-blade wounds of the skull, which up to that time were all the cases that I had been able to collect. Since then I have found 16 additional cases, and I now wish to arrange them systematically, and to give their histories somewhat in detail. In this age of brilliant and successful cerebral surgery, and when the subject of traumatic intracranial lesions is receiving such a large share of the attention of the surgical world, I trust an account of these 45 cases may prove of interest.

Many of these cases were reported at a time when antiseptic methods of wound-treatment were totally unknown, and when even progressive surgeons were not of one mind as to the needs for free drainage, and the early removal of all depressed fragments of bone. From a medico-legal standpoint this study may also prove of value, for in not a few homicide trials the legal advisers of the defendants have endeavored to disprove the testimony of witnesses, and have contended that it is physically impossible for the blade of an ordinary pocket-knife, when held in a man's hand, to be driven through the bones of the skull and injure the brain and its membranes. That such an accident can occur and with moderate frequency too, the following cases will show.

Many of them are so remarkable and some few show such a total want of all symptoms which would lead one to suspect serious injury, that it has been found impossible to arrange them in the form of a table which would be of service, and for this reason a more or less detailed account of each of the 45 cases will be given, and they will be arranged according to the date of publication.

Many of them differ but slightly from ordinary cranial injuries; their symptoms therefore are those commonly met with, and have little to interest us, beyond aiding to establish the fact that the skull can be penetrated with an ordinary knife-blade. Some of the cases are so remarkable, however, and show such an utter lack of symptoms such as we would expect to encounter in an injury of this serious nature, that we might almost doubt the correctness of the report. The cases reported by Elliott, Slee, Eves, Beckwith, and others prove conclusively that the injury is not necessarily disabling. The history of Dr. Beckwith's case (No. 14), if truly reported, is marvelous, as the man after receiving the injury walked some distance, with the knife sticking in his skull, and after it was pulled out he took the knife, shut it up, put it in his pocket, and remarked, "I have made a knife by this transaction." He walked away, and suffered no severe after-results.

The prognosis, as in all cases of compound punctured fractures of the skull, is grave; but unless some one of the larger and deeper cerebral vessels is wounded, and unless infection occurs, the chances of recovery are good, especially if the wound in the skull be immediately enlarged and provision made for proper disinfection and drainage.

The treatment in the cases reported has varied from so-called "masterly inactivity" to aspiration of the abscess without enlarging the wound in the skull, and the more modern method of trephining, and providing for the escape of the wound-discharge.

The symptoms were those common to all cerebral injuries—headache, delirium, and coma, with paralysis of motion and speech, when the centers governing these acts were directly involved in the primary injury, or when these centers were pressed upon by blood clot. Profound shock and collapse were present when the larger blood vessels were wounded, with symptoms of intracranial pressure when there was sudden and violent hemorrhage, due to the wounding of the deeper cerebral vessels, and symptoms of increasing pressure when blood clots formed slowly, or when the blood vessels wounded were those of the dura mater, and were of small size. In studying carefully the histories of these cases, it is shown in the most remarkable manner the tolerance of the brain to the presence of clean foreign bodies. When septic infection was not produced by material carried from without, and when important blood vessels and motor centers were not directly injured by the blade of the knife at the time of the injury, the most remarkable absence is shown of all symptoms pointing to cerebral mischief, and an apparent freedom from all serious consequences for a considerable interval. The majority of the wounds were received in street brawls; 36 were caused with an ordinary pocket-knife, which was held in the hand; two were caused with daggers; in one case an open pocket-knife was thrown at the individual. In three of the cases the wound was through the orbit, where of course there is greater liability to injury. In two cases the injury was received by the individual falling upon the point of

an open knife, which was held in the hand and was thus driven through the orbital plate of the ethmoid bone and into the brain. One case received the injury in a most unique manner. A woman was cutting some form of solid but explosive material. The mass ignited, and the force of the explosion was such that the knife-blade was broken off from its handle, and was driven through the orbit into the brain, and wounded the middle cerebral artery. The woman died in the course of a few hours from hemorrhage. The position of the majority of the wounds, as can readily be understood, was on the left side of the head, in the temporal and parietal regions, although many occurred in other positions. In several cases no suspicion whatever of knife-blade wound was entertained during life, and the true nature of the injury was only discovered at the postmortem examination. 22 of the patients died, and 23 recovered; 4 died from hemorrhage and exhaustion consequent upon the injury of the larger cerebral vessels, and in two of these cases the knife-blade penetrated the lateral ventricle. In one of these latter cases the patient lived for forty-eight hours after the receipt of the injury. Of the 8 fatal cases from septic infection and inflammatory mischief one lived six years after receipt of the injury, and for three years after the knife-blade was removed. It is hardly fair to judge of the mortality of these injuries from this series of cases, however, as very many of them—in fact, a large majority of them—were treated at a time when the more modern methods of wound-disinfection were totally unknown, and when it was considered necessary to wait until some symptoms of cerebral mischief arose before resorting to surgical interference. We must be lenient in our judgment of results in the cases where the trephine and chisel were used, as in many of them the injury was so severe that death occurred from hemorrhage, and the method employed in the treatment of the wound had nothing to do with the result. Recovery took place in 14 cases where no attempt was made to enlarge the wound in the skull, and in one of these cases recovery took place after a cerebral abscess had formed, and an aspirating needle was passed down through the wound in the skull, the pus evacuated through it, and the cavity washed out repeatedly.

Case I.—Ledward ("Mem. Med. Soc.," London, 1795, IV., p. 424).

A girl, aged 18, was accidentally wounded by a sickle in the left temple just above the cheek-bone. Death occurred the next day. Postmortem examination showed that the temporal artery had been divided, and the point of the sickle had penetrated the brain.

Case II.—Dupuytren (from "Am. Med. Recorder," 1823, p. 569).

A young man who two years before had been stabbed with a knife on the upper and back part of the right parietal bone. The wound healed and he had no bad symptoms. At length a tumor appeared at the seat of the wound, which suppurated and burst, discharging a piece of knife-blade, an inch and a half long. Two months and a half afterward Dupuytren trephined and evacuated an abscess, but death ensued.

Case III.—Congreve Selwyn ("Lancet," 1838, II., p. 16).

A child fell upon the point of an ordinary cheese-knife, with a blade four and a half inches long and averaging three-quarters of an inch

ridge, and penetrated the posterior portion of the orbital plate of the frontal bone, to the depth of three and a quarter inches, and injured in its course the optic nerve and the levator palpebræ muscle. There was great difficulty in removing the knife, and brain-substance protruded at once, and more was discharged on the eighth day. Hemorrhage was slight and the child was delirious for a fortnight, but recovered with the eye blind.

Case IV.—Gintrac ("Journal de Méd. de Bordeaux"; abstract, "Am. Journal Med. Scien., Oct., 1847, p. 473).

A child, aged 12, fell on the point of a knife, which was open in his hand, the blade penetrating the left orbit. He did not cry out but ran for some distance with the knife sticking in his head; he soon became unconscious and was in profound shock. The knife had passed between the globe of the eye and the upper eye-lid, and had perforated the orbital plate of the temporal bone. It was extracted with difficulty, and only with the help of another person. It had penetrated easily two inches from the margin of the eye-lid. He regained consciousness in four or five hours, and recovered without a bad symptom.

Case V.—Wm. Kenney ("West. M. and S. Journal," 1849, 3 s., IV., p. 307).

A boy, aged 17, was stabbed with an ordinary pocket-knife, the blade of which was two and a half inches long and three-quarters of an inch broad. It was driven with such force as to penetrate the skull the full length of the blade, at a point midway in and about three-quarters of an inch above a line drawn from the external angle of the eye to the external auditory meatus. The handle of the knife as it stood projecting from the surface of the scalp looked slightly forward and upward. The knife was removed with difficulty, but without a trephine, and by the end of the month the boy was entirely well.

Case VI.—D. W. Yandell ("Western Med. and Surgical Journal," V., 1850, p. 245).

A man was first seen three months after he had received a stab-wound with a pocket-knife on the left upper eye-lid. Ten days after the receipt of the injury epileptic convulsions occurred, and increased in severity and numbers until they recurred from fifteen to twenty times in twenty-four hours. Death occurred from septic symptoms, and at the postmortem examination a knife-blade one and one-quarter inches in length was found projecting into the brain. It had entered the cavity of the cranium on a line with the superior and inner third of the orbital

imbedded in the bone; its removal was almost impossible. The blade

had broken off on a line with the bone, and there were three large abscesses of the brain.

Case VII.—Wallmann ("Virchow's Archives," 1858, p. 200).

was firmly imbedded a portion of a dagger blade 6 lines in breadth. The blade projected obliquely from the frontal bone having a direction inward and downward. It measured one inch and one line in length, and projected from the inner table one and three-quarters lines. There was no trace of fracture surrounding it. Special symptoms were not given. The patient lived seven years after the receipt of the injury, and died from intercurrent disease not connected with the injury.

Case VIII.—G. Devron ("New Orleans Med. News and Hospital Gazette," Feb., 1860; and "Am. Jr. of Med. Sciences," April, 1860, p. 575).

A man, aged 29, was stabbed in a fight. There were three wounds in all, in the occipito-parietal region, on the face and on the left shoulder. The wound of the scalp bled freely, and a styptic was applied and some adhesive plaster; he was then sent home. The next day he complained of headache, became sleepy, and gradually lapsed into coma, and died 48 hours after the receipt of the injuries. Postmortem revealed a blade of a pocket-knife which had been driven through the bone of the skull, and projected two inches into the substance of the brain.

Case IX.—Sydney Jones ("Trans. Pathological Soc.," London, 1863-64, XV., p. 188).

A woman was chipping a piece of some form of explosive compound with a knife which she held in her hand, when the mass exploded. The force of the explosion broke the knife-blade from the handle which remained grasped in her hand, while the blade was driven into her brain through the roof of the left orbit, and divided the middle cerebral artery. At the postmortem examination the blade of the knife, which was four inches long, was found in the interior of the cranium.

1867, p. 81).

The patient received an injury with a knife during a fight, being struck on the left side of the forehead. The wound was one inch in length, and the broken end of a knife blade remained. No symptoms were given. The knife blade was extracted with the forceps after the superficial layer of bone had been chiseled off. The wound in the bone did not penetrate, and healed without further incident. Two years later patient died of tuberculosis, which had existed before the injury.

Case XI.—W. Th. Renz ("Schmidt's Jahrb.," 1868, CXXXVIII, p. 260; also an abst. in "Detroit Review of Med. and Pharm.," 1869, p. 244).

A man, aged 30, was stabbed in the head; blood spurted out in a stream, but soon ceased on the application of cold. The wound was situated on the right side of the forehead, two and one-half inches above the

ear, and at the border of the hairy scalp. He worked four days, but was obliged to give up on account of headache, which increased in severity. Symptoms of meningitis and pus occurring, the wound, which had healed, was opened and a knife-blade was seen sticking in the skull. It was withdrawn by means of a pair of forceps, and measured two and one-half inches long by one-quarter of an inch wide. The wound was sucked out with a syringe, and this was done morning and evening. Recovery was slow, but complete.

Case XII.—Couper (" Lancet," 1871, Vol. I., p. 478).

When first seen the patient had been insensible for twenty-four hours, and could not be roused ; the pupils were semi-dilated and sluggish, and the left eye-lid swollen and discolored. The whole of the left side of the body was paralyzed, while there was convulsive twitching of the right side of the face and neck. Death occurred on the fourth day. Post-mortem showed a large clot of blood under the middle and anterior lobes of the left cerebral hemisphere, and the whole of the anterior lobe, including the corpus striatum, was reduced to a semi-fluid mass. Through the roof of the left orbit was a small opening made by some sharp instrument, which had penetrated into the brain and injured the vessels going into the corpus striatum. On the skin of the upper eye-lid was found a minute scar, which had escaped notice during life.

Case XIII.—W. H. Parish (" Phila. Med. Times," 1873, III., p. 754).

A man, aged 64, was admitted to the hospital drunk, and with a small wound of the right temple. He walked around the wards and made no complaint until three days after, when he had headache. The next day he became insensible and died. Postmortem examination showed a small wound in the right temple, and passing through the squamous portion of the temporal bone, immediately above the zygoma, a blade of a small pocket-knife was found. The blade entered the middle cerebral lobe, and was two inches long, and its shoulder was in contact with the external surface of the bone. It had not been broken, but wrenched from the rivet in the handle, and was entirely concealed by the skin over it.

Case XIV.—C. H. Mastin (" Richmond and Louisville Medical Journal," December, 1873, Vol XVI., p. 706).

A man, aged 33, was stabbed with an ordinary pocket-knife in the left temple, and immediately became unconscious, but soon recovered, with no unpleasant symptoms beyond headache and swelling of the left eye-lid. In three weeks he was " chopping wood and gathering turpentine." In four months he had a swelling, which burst and discharged pus, and he detected a bit of metal sticking in the skull. His only symptoms were " dull, heavy headache, and frightful dreams at night." Dr. Mastin chiseled away the bone and removed a blade of a knife, which had been firmly wedged in the bone for three days less than six months. It had penetrated the frontal bone just back of the frontal process, which articulates with the superior orbital or frontal process of the malar bone, and just above the sphenoido-frontal suture. There was recovery.

Case XV.—E. B. Turnipseed ("Trans. S. Carolina Med. Asso.," April 14, 1874, p. 101).

The case is most remarkable as to the length of time during which the knife-blade had been imbedded in the brain, a period of quite three years. A blade of an ordinary pocket-knife was driven into the patient's forehead, immediately to the left of the median line. The only evidence he had of the blade remaining in the wound was the testimony by his assailant that the knife-blade was broken off. He had convulsions within a few days. Three years after the injury, Dr. Turnipseed removed from his forehead a broken blade 1¼ inches long, which was covered in part with a bony deposit and was much corroded. He died three years after the operation, and six years after the receipt of the injury.

Case XVI.—Joseph Bell ("Edinburgh Med. Journal," 1874-75, XX., p. 210).

A young man, aged 19, was stabbed with a pocket-knife in the back part of the head. The wound of the scalp was very small, one inch behind and a little above the level of the right ear, and there was a small fissure in the skull. As the injury was considered trifling, he was sent home, but soon became delirious and then comatose. He gradually recovered. No knife-blade was found, and the skull was not trephined.

Case XVII.—John H. Packard (Reported by O. Roland, "Phila. Med. Times," 1876, VII., p. 126).

A man, aged 22, drunk and much excited, was admitted to the Episcopal Hospital, with the blade of a penknife imbedded in his skull. It was broken off on a level with the scalp in the left parietal region. The skull was trephined, and the blade was found to have penetrated the brain to the depth of one and a quarter inches. Death followed from cerebral abscess, which was directly beneath the seat of the wound.

Case XVIII.—W. H. Baker ("Trans. Phila. Pathological Soc.," 1877, VI., p. 125).

A man, aged 22, was admitted to the German Hospital in an insensible condition, and with contracted pupils. A piece of steel was projecting out of the wound in the right parietal region about one-quarter of an inch. This was extracted with some difficulty, and proved to be the blade of a knife, five and three-quarters inches long by three-quarters of an inch wide. Death occurred within a few hours.

Case XIX.—Dr. Harrison Allen (Ibid).

Dr. Harrison Allen, in the discussion of the foregoing case, spoke of a negro who was in the Philadelphia Hospital some years before. At the postmortem examination a knife-blade was found within the skull. It had been broken off after it had penetrated the bone. During life no suspicion of such a condition of affairs had been entertained.

Case XX.—J. Gregg Smith ("Med. Times and Gazette," Sept. 28, 1878, p. 378).

A sailor, aged 25, was stabbed with an ordinary clasp pocket-knife. The left temporal bone was penetrated, and the middle cerebral artery

divided. Death occurred in twenty-one hours from hemorrhage. He was insensible, collapsed, with right-sided paralysis, and left-sided movements, when admitted to the hospital, and although the bone was trephined, the bleeding could not be arrested.

Case XXI.—A. T. Bartlett ("St. Louis Med. and Surg. Journal," March, 1879, p. 211).

A young man, aged 20, was stabbed on the left side of parietal bone. From the evidence of the bystanders who witnessed the fight several blows must have been exchanged between the combatants after this particular blow was received, as the patient's hat, which fell off at the beginning of the fight, was cut at a point corresponding to the wound in the scalp. His hat was handed to him, which he placed on his head and walked home in company with others, a distance of a block and a half. Arterial blood flowed freely from the wound, and several small bits of bone were removed. "Masterly inactivity" was exercised in the method of treatment, and he died in ten days. The autopsy showed that the blade of an ordinary pocket-knife, two and a half inches long by three-eighths of an inch wide, had been driven into the brain its entire length, and divided the anterior division of the middle cerebral artery.

Case XXII.—A. Kumar ("Medico-Chirurg. Centralblatt, Wien," 1880, p. 425).

The patient was a six-year-old boy. His father, in a moment of passion, threw, with considerable force, a sharply ground carving-knife, which struck the door at the opposite side of the room, at the same time as his son entered. The knife entered the boy's head, and was so tightly imbedded as to require considerable force for its removal. The wound was in the right parietal bone, near its lower inner angle, and was about one centimeter long, having an oblique direction from right to left. The boy did not lose consciousness on the receipt of the injury, and there was little hemorrhage. On the twenty-second day he complained of headache and vomited. There was strabismus, with slowing of the pulse. Twenty-four days later the boy, having become pale and emaciated, developed unconsciousness, with a cold skin, and small pulse over 100. The wound was covered with fungous-like edematous granulations, and discharged a thin serous pus. The edges of the wound in the parietal bone were removed with chisel and hammer, laying bare the dura to the extent of 2.5 by 1 centimeter. The patient recovered.

Case XXIII.—S. Moos ("Arch. Otol.," N. Y., 1881, X., p. 18).

A boy, aged 17, was stabbed March 19, 1880, with a knife, the point of which had been previously broken off. The wound was in the left side of the skull, midway between the ear and the eye, and on the level of the frontal sinus. The blade was so firmly impacted that it was withdrawn with difficulty. There was temporary irritation on the left oculomotor and vagus nerves, and permanent (?) paralysis of the left facial and acoustic. The boy recovered.

Case XXIV.—Hoselelitz ("Wiener Medicinische Presse," 1881, p. 1043).

The patient was struck on the left side of the forehead with a pocket-knife, the point of the blade being so firmly fixed as to require its removal with forceps. The wound occupied the left frontal protuberance, and was directed obliquely. There was headache, lasting several days. The wound healed, leaving an opening the size of a needle, discharging pus. The trephine was not used. Death occurred four months later. The autopsy showed that the membranes were adherent over the seat of the injury, forming a sac the size of a dove's egg, filled with grayish-colored fluid.

Case XXV.—W. H. Sikes ("Detroit Lancet," n. s., 1881-82, V., p. 51).

A young man, aged 17, was stabbed about 10 P. M., of July 4th, 1880, and as he did not suffer much from pain, went home and to bed without telling his family. The next morning he had no inconvenience other than a slight soreness of the scalp. His family noticed, however, that he could not recall words in conversation, and sent for a physician. From the insignificance of the wound and absence of all symptoms of intracranial mischief, with the exception of the aphasic condition, he was undecided as to the nature of the injury. When Dr. Sikes saw him in consultation on July 7th, at least sixty hours after the receipt of the injury, there was a small cut half an inch long in the scalp, three inches above the external opening of the left ear. There was no swelling of the scalp or rise of temperature. The pupils were normal and contracted equally to light, and there was little or no pain or uneasiness in the head. His mind was apparently perfectly clear, but there was nearly complete aphasia. A button of bone was removed with the trephine, and neither brain nor membranes were inflamed. He improved rapidly in health and strength, and in the use of words. By August 16th, it was noticed that he was failing, and he died on the 18th, from abscess of brain.

Case XXVI.—O. H. Allis for W. P. Painter ("Philada. Medical Times," May 20, 1882, p. 576).

A man was stabbed with a dagger at the anterior inferior angle of the left parietal bone, and was shortly hemiplegic. A disc of bone was removed and a large quantity of dark blood escaped, and almost immediately the right arm could be moved and within a week he could walk. He died three months after of small-pox, and up to that time he had been gradually improving, though at no time could he speak fluently or walk without a slight halt.

Case XXVII.—Rehm ("Aertztliches Intelligenzblatt," München, 1881, p. 451).

During a fight a man was struck on the head with a knife held in the grasp of his opponent. There was a flesh wound immediately above the middle of the right eye-brow, communicating with a perpendicular wound two centimeters long in the frontal bone beneath. Slight hemorrhage

followed the reception of the injury, but after bandaging the wound the patient lay down and slept. He returned home the same evening, and resumed his work, not knowing that the knife-blade had broken off in the wound. For two years he was perfectly well, with a tumor the size of a hazelnut occupying the position of the wound. On pressing upon the tumor he then noticed for the first time that the knife-blade was sticking in his head. After this the tumor suppurated, and he complained of headache when the weather was warm. Five years later, he fell while walking, and was attacked with vomiting, was bled, and resumed work in three days. Eight years after the injury he suffered intense headache, vomiting, fever, loss of hearing, principally on the right side, and stupor, and died in three weeks. A few days before death a knife-blade, measuring three centimeters in length and two in breadth, was removed with forceps, with an amelioration of the symptoms.

Case XXVIII.—J. M. Barton ("Phila. Med. Times," May 20, 1882, p. 577).

A man was brought to the German Hospital three days after receiving a penetrating wound of the skull with a pocket-knife, which had entered at least one inch. Up to the day of his admission there had been no symptoms to indicate so serious an injury, but inflammatory changes set in, to relieve which the trephine was employed, but death ensued.

Case XXIX.—Freyer ("Berliner klinische Wochenschrift," No. 10, 1882).

A man was struck on the head with the fist, rendering him senseless. He fell, bleeding freely from the seat of injury, which was immediately over the right temple. It was not known at the time that a knife had been held in the fist. The left leg and arm were paralyzed, and the patient complained of a sensation of their being asleep. The tongue could be moved with difficulty, and there was interference with speech. Ten days after the injury the wound was opened, and a piece of knife-blade was found sticking out from the bones of the skull for two millimeters. Attempts at removal with strong bone forceps proving fruitless, the blade was removed by means of hammer and chisel. It measured sixty-four millimeters in length and fifteen in breadth. The patient recovered.

Case XXX.—H. M. Holmes ("Trans. S. Carolina Med. Assoc.," 1882-86, p. 111).

A man was stabbed with a pocket-knife two and one-half inches above the left eye and three inches in front of the ear. He fell to the ground, had a slight convulsion, blood flowed freely from the wound, and he remained in a stupor for thirty hours. Considerable force was necessary to remove the knife, which remained sticking in the skull. Its blade was one-half inch wide and had penetrated two and one-half inches. His family refused to permit the operation of trephining, and it was ten days before he was able to notice anyone, and two months before he could walk, and then with little power in his right leg and arm. Epileptic convulsions developed in four months and recurred at long intervals.

Case XXXI.—C. B. Nancrede ("Internat. Encycl. Surgery," Vol. V., p. 83).

A young man, aged 19, walked into the Episcopal Hospital and complained of a sore on the top of his head, and which he said was the result of a blow which he had received two months before. An ulcer was found over the position of the left parietal lobe, and in the center of this ulcer a broken knife-blade projecting from the skull. He stated that when struck on the top of his head the blow had been so forcible that he had fallen on his hands and knees, but had recovered himself almost immediately ; that at no time had he been unconscious, nor had he had headache. He was thoroughly surprised to learn of the knife-blade, which up to that time he had not even suspected, and all symptoms of brain injury were absent. No complaint was made when the blade was withdrawn, but on the afternoon of the same day he had headache. In two days he had several convulsions, and a trephine was used to remove a button of bone, and the wound in the dura was distinctly seen. He was attacked with erysipelas, and died of an abscess in the left parietal lobe.

Case XXXII.—J. S. Beckwith ("Gaillard's Med. Jour.," February 3, 1883, p. 120).

In many respects this is the most remarkable case of all, for Beckwith saw the man stabbed, and states that the man ran some distance to him with the knife-blade still sticking in his head, and asked him to pull it out. It was withdrawn with great difficulty, as it was tightly fixed in the bone. The blade of the knife measured three and one-half inches long, and it had entered along the line of the sagittal suture, and about an inch and a half from its junction with the coronal suture. The man remarked, "Well, I have made a knife by this transaction," put the knife in his pocket and walked off. Three years after the accident he was perfectly well, and never had any bad effects.

Case XXXIII.—P. S. Conner ("Cincinnati Lancet-Clinic," 1884, n. s. XII., pp. 1-4).

A man was stabbed in the forehead with an ordinary pocket-knife, and as the wound was scarcely perceptible its nature was not discovered during life. Death occurred in twenty-four hours.

Case XXXIV.—F. J. Glasgow ("St. Louis Courier of Medicine," January, 1884, p. 75).

A young man complained of intense headache, caused, as he supposed, by a simple blow on the head with a stone, but there was no external mark of injury to suggest that a blow had been received. There were no symptoms whatever other than the headache, till about three weeks from the date of the injury, when, in walking across the hospital ward, he fell to the floor and died instantly. Postmortem examination disclosed no wound whatever of the scalp externally, but upon removing the calvarium, a knife-blade two inches long was found projecting from the inside of the skull and penetrating the substance of the brain. An abscess had formed.

Case XXXV.—Schneider ("Archives für klinische Chirurgie," Berlin, 1886, p. 691).

A man was stabbed with a knife in the left temple during a fight. The wound was six centimeters above the left external angle of the eye in a line drawn from the outer angle of the eye upward and backward, parallel to the suture. Immediately after the receipt of the injury the patient fell unconscious, and remained so for one houh. On recovering consciousness there was inability to speak, with paresis of the right arm, while the right leg could be moved but feebly. Four days afterwards the inability to speak still continued ; the right arm was almost completely paralyzed. There was complete paralysis of the right leg. The pupils were equal, and the temperature normal. The paralysis of the right side increased from day to day. The skull was trephined nine days after receipt of injury. A blood clot was removed, and the first branch of the median cerebral artery began to spurt after the removal of the clot and was ligated. The patient spoke on the third day, and on the eighth day he could move the arm and leg. The case terminated in complete recovery.

Case XXXVI.— H. C. Dalton ("Weekly Med. Rev. from Annual Univ. Med. Sc., Sajous," 1888, Vol II., p. 300).

A case of penetrating knife-blade wound three-quarters of an inch behind the external canthus of the right eye, the blade being buried fully two inches, and there being no doubt that it penetrated to the brain. The wound was dressed with antiseptic precautions, but the bone was not trephined. There was complete recovery.

Case XXXVII.—C. B. Ball ("British Medical Journal," April 7, 1888, p. 748).

A man, aged 26, was stabbed on the left side of the head with a penknife, ten days before he came under observation. Aphasia developed immediately after the injury, and there was increasing pain in the head. There was a small scab over the squamous portion of the temporal bone. He was kept under observation for five days, and then trephined over the seat of the wound and a clot removed. The knife-blade had penetrated the superior temporo-sphenoidal convolution, traversed the fissure of Sylvius, and probably injured Broca's convolution. Recovery was complete.

Case XXXVIII.—G. W. Brown and T. J. Birch ("Trans. Philada. Co. Medical Society," 1889, Vol. X., p. 397).

A man, aged 51, was stabbed on August 14. He did not know the nature of his injury, and for two or three days afterward worked as a laborer in a brick yard near Peekskill, N. Y. During this time he had only slight, though persistent, headache. For the next two days he had slight attacks of vertigo, and became unsteady in his gait. He was frequently at a loss to express himself correctly, and his attempts to read were unsatisfactory. Thinking he was about to have a severe illness, he started for his home in Pennsylvania, and had the greatest difficulty in reaching there, owing to his dazed condition and increasing aphasia. He was not

seen by Drs. Brown and Birch until the 25th, ten days after the injury, as his family thought he was drunk and would sleep it off. There was a small scar on the left side of his head just behind the frontal eminence. He was completely hemiplegic and aphasic. The next day he was operated upon. A disc of bone was removed with the trephine, and in the center of the disc a foreign metallic substance could be seen from the exterior. Projecting into the cranial cavity and firmly fixed in the bone was a knife-blade one and one-half inches long, one and one-quarter inches of this being in the brain. There was an abscess at the point of injury. The knife-blade was buried in the patient's brain from the morning of the 14th until that of the 26th of August, a period of twelve days. He recovered, and was fully able to take up his work, as laborer, in one year.

Case XXXIX.—F. S. Eve ("Tr. Path. Society of London," 1889-90, Vol. XLI., p. 231).

A man, aged 37, died of phthisis, and at the postmortem examination a point of a small penknife-blade was found projecting from the inner surface of the skull. It was half an inch long, and had penetrated the sutures between the second and third convolutions, the brain itself being uninjured. It had broken off flush with the external surface of the cranium. There was a small puncture in the dura mater. There was no evidence of old or recent inflammation of the brain or its membranes. The patient's friends stated that he had never been well since he had received an injury to the head a year before his death, for which he had been admitted to St. Bartholomew's Hospital.

Case XL.—T. M. Girdlestone ("Australian Med. Journal," February 15, 1890, p. 39).

A man, aged 25, was stabbed with a narrow-bladed penknife in the left temple, one and a half inches behind the orbit. The wound in the skin was small, and a roughened surface on the bone could be detected. He refused all operative treatment, and after the occurrence of pressure-symptoms and convulsions died on the fifteenth day. Postmortem examination showed that the point of the knife-blade had penetrated the squamous portion of the temporal bone, and pricked the dura mater. There were several small splinters of bone attached to the dura. The cut in the bone was only a quarter of an inch long, and that in the dura was only just visible. Death was due to inflammatory changes which were chiefly confined to the membranes. The trephine would have saved life.

Case XLI.—Morse ("Pacific Medical Journal," March 1, 1890).

A man was stabbed with a penknife just above the left frontal eminence, and aphasia and right-sided hemiplegia ensued, with pressure-symptoms. Upon trephining the point of a knife-blade was found and a large subdural clot. Consciousness returned, but he became very restless and tore off the dressings, and another clot formed. This was removed, but death occurred from exhaustion. The autopsy disclosed the fact that the knife had penetrated the ventricle, which was full of blood. There were also inflammatory changes in the brain

Case XLII.—Richard Slee ("Med. News," July 25, 1891, p. 95).

A man was admitted to the City Hospital in Brooklyn, suffering from gun-shot wounds of the abdomen and thigh, for which abdominal section was done, but death occurred from sepsis. At the postmortem examination, on removing the brain, a sharp, projecting point was discovered in the posterior fossa on the left side, which on close inspection was found to be the blade of a knife, five-sixteenths of an inch wide, which was projecting into the brain for one inch. There was no evidence whatever, recent or old, on the external surface of the skull, to show where it had entered. It had entered the skull three and three-quarters inches posterior to the left external auditory meatus, in the line of the occipito-parietal suture, and had penetrated the posterior portion of the occipital lobe. The point of the blade was ensheathed in a strong fibrous capsule about half an inch thick, that was adherent to the brain and its membrane by old and firm adhesions. The brain was apparently normal, save in the immediate vicinity of the knife-blade, where the membranes were slightly thickened. The blade was black and corroded, and everything pointed to its having been in its position for a number of years. It was broken off on a level with the surface of skull, and there was no depression or displacement of the bone. The man enjoyed the best of health at the time he was shot, and his wife and mother never knew of his ever having had a serious injury, nor had he ever complained of headache, and was always in the best of spirits, and was a good and able-bodied workman.

Case XLIII.—Virgil McDavitt ("Med. News," August 29, 1891, p. 253).

The patient was under the care of Prof. E. Bartlett, in the Louisville City Hospital, during the winter of 1849-50. He was insane, but made no complaint, nor would he talk. Cerebral disturbance was evident enough, but no cause could be assigned for it. There were many scars on the chest, evidently stab wounds, and also above the external angle of the left eye a festered spot, so small that it was not regarded as of any significance. He died in a few weeks, and postmortem examination showed a dirk-knife blade, from two to three inches long, in the left anterior lobe of the brain, having penetrated the orbital process of the frontal bone and broken off. A deep abscess had formed around the blade in the brain. How long the knife-blade had been there was not known, but it must have been there many months.

Case XLIV.—Daniel Elliott, of Newark, N. J., (personal communication confirmatory of a newspaper article, February 16, 1893).

A man died from the result of a gunshot wound of the head, and at the postmortem examination a knife-blade was found projecting from the inner side of the skull. At some earlier period of his life this had been driven through the bone and broken off. It was an inch in length and protruded into the brain, passing through the membranes more than half an inch. There was no evidence of inflammation, and the steel was even with and barely noticeable on the outer surface of the skull. On the inner side the steel had corroded, and was in general appearance like a piece of wire ; but when the point was touched the corrosion fell off, and

the point of the blade was unmistakable. It had not entered through a suture, and on account of the absence of inflammation and the degree of corrosion it must have been there many years. The knife-blade was six or eight inches from the recent gun-shot wound, and had nothing to do with the abscess made by the bullet, and from which he died.

Case XLV.— Howe, of Hartford, Conn. (A personal communication to Dr. John B. Roberts, of Philadelphia).

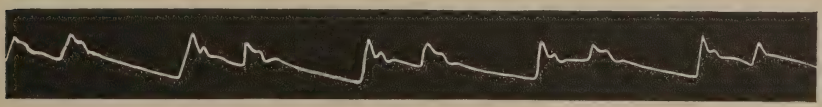
John G. was stabbed with an ordinary pocket-knife, the blade being two and one-half inches long and three-eighths of an inch wide. The knife entered the skull over the left ear, a little to the left of the median line. The force of the blow staggered him, but he did not fall. He answered questions, described his assailant, walked five hundred yards, sat down, as he felt faint, and finally, in five to seven minutes, lost consciousness. The wound bled freely. He had complete paralysis of the right arm and leg, and convulsive moments. Dr. Howe trephined over the seat of the puncture. The patient never regained consciousness, and died in forty-eight hours. Postmortem examination showed that the knife-blade had penetrated the left lateral ventricle, passing through the ascending frontal convolution. The ventricle was filled with blood.

RARE FORMS OF THE PULSE

By Thomas J. Yarrow, Jr.
Philadelphia.

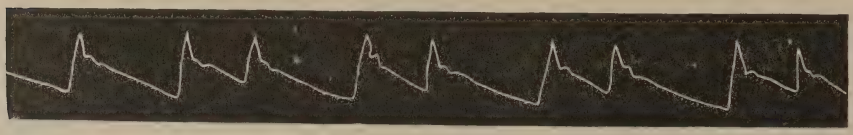
The following observations are based on a series of seven thousand different pulse-tracings taken by the writer. The first five cases illustrate a rare form of pulse commonly known as the twin or doubled pulse:

Case I.—A woman, aet. 36 years—neurasthenic and a hypochondriac. The twin pulse in this case was not constant, and would appear at irregular intervals, disappearing on slight excitement. The patient was fully conscious of the intermissions in her heart-action, and described the sensation as a disagreeable halting in the region of the heart. There were no symptoms of organic heart-disease. On auscultation the second sound of the heart was heard to be prolonged, being followed by an intermission corresponding to that observed in the tracing. After two months of rest and tonic treatment, the patient remained unimproved.



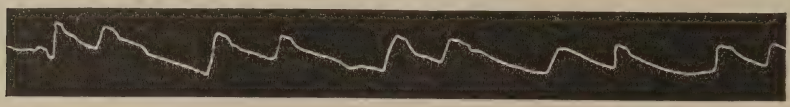
Case I.

Case II.—A man, aet. 33—cirrhosis of the liver, final stage—taken during sleep. The twin pulse disappeared on waking, and was apparently not present again during life. The heart in this case was markedly diseased, murmurs systolic in time being present at the mitral and aortic areas. The patient was not conscious of the intermissions.



CASE II.

Case III.—A man, aet. 70—chronic rheumatism, an alcoholic with marked arcus senilis and very tortuous temporal arteries. The heart was evidently the seat of fatty degeneration. There were no murmurs present, no enlargement of the heart; but its sounds were feeble.



CASE III.

Case IV.—A man, aet. 25—the twin pulse appeared during the first stage of acute endocarditis, disappearing on recovery.

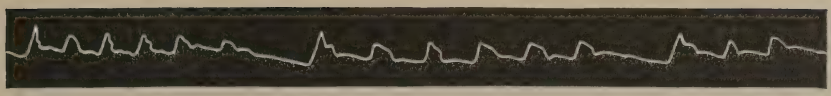
Case V.—A man, aet. 30—the ewin pulse appeared during convalescence from typhoid fever, disappearing on complete recovery.

The above five cases would seem to show that the twin pulse attaches itself to no special condition, nor is it of the slightest diagnostic import.

Case VI.—Of a somewhat rarer occurrence than the twin pulse is the so-called pulsus quadrigeminus, or, as it is better termed by Sansom, the quadruplex pulse. The following tracing was taken from a man, aet. 80 years, affected with hemiplegia and markedly atheromatous arteries. The heart showed slight enlargement, and faint systolic and diastolic murmurs were heard over the aortic area. The quadruplex pulse was present for about ten minutes, when the pulse became irregularly intermittent. The patient was not seen again.

CASE VI.

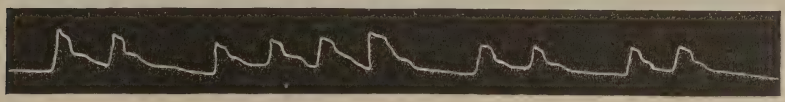
Case VII.—A man, aet. 38 years—affected with marked valvular disease. The pulse would regularly intermit after six beats. There were no other symptoms of note; his heart was in a fair state of compensation, and he was not conscious of intermissions.



Case VII.

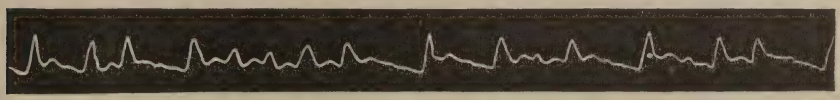
Case VIII.—A man, aet. 60 years—affected with chronic rheumatism; there were no symptoms of heart disease. His pulse intermitted after two or four beats; never, as far as I could learn from a period of observation lasting over three months, did it intermit in any other form. He apparently enjoyed fair health.

In all the foregoing cases on auscultation there was a distinct pause in the action of the heart, coinciding with the intermission of the pulse-beat.



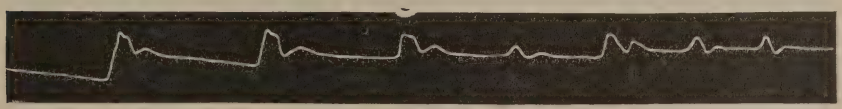
Case VIII,.

Case IX.—A man, aet. 22 years—addicted to the excessive use of tobacco, apparently in good health save for disagreeable and at times distressing palpitation. On auscultation it was impossible to tell the first sound of the heart from the second, so extremely irregular was its action; in fact, a case of *folie du cœur*. He discontinued the use of tobacco, and six weeks after his heart and pulse became normal.



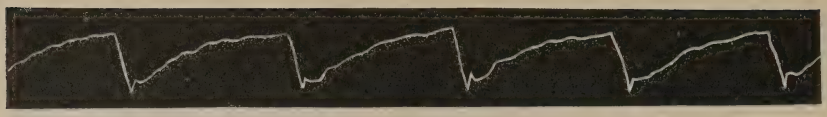
Case IX.

Case X.—An example of a rare form of pulse which has been termed the "rat-tail" pulse. The tracing was taken from a man, aet. 60 years, affected with chronic nephritis and failing left ventricle. Death followed a few days later from uremia.



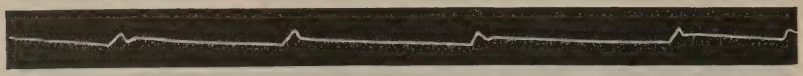
Case X.

Case XI.—A man. aet. 80 years—affected with chronic rheumatism and fatty heart. His pulse never exceeded 30 beats a minute, and he apparently enjoyed fair health. On auscultation the sounds of the heart were heard to be normal, though very slow. A few days later he suddenly dropped dead. (No postmortem.)



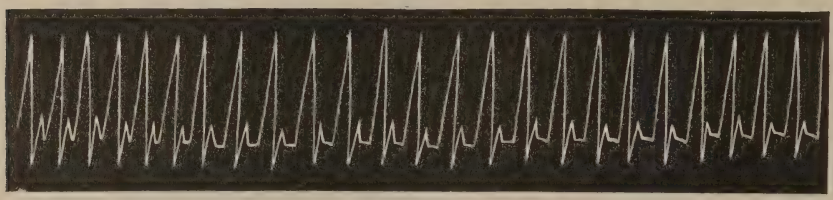
CASE XI.

Case XII.—A girl, aet. 18 years. This case illustrates bradycardia occurring during convalescence from typhoid fever. Her pulse on the 35th day of the disease gradually fell from 86 to 24 beats a minute; this condition lasted for three days, when her pulse gradually regained its normal rate. There were no symptoms of heart disease, and the patient made a complete recovery.



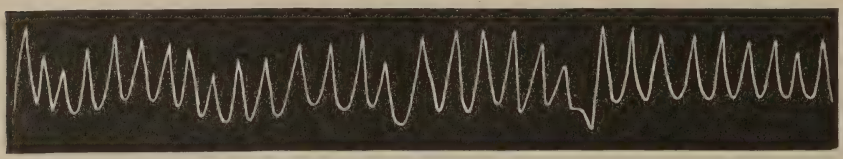
CASE XII.

Case XIII.—A girl, aet. 22 years—affected with acute endo-pericarditis, terminating fatally on the 4th day of the disease.



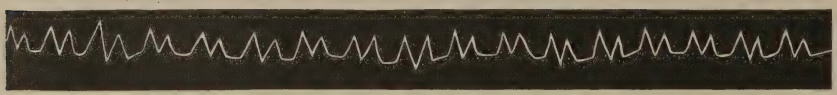
CASE XIII.

Case XIV.—A man, aet. 36 years—affected with epilepsy—the tracing was taken during a paroxysm, the pulse becoming normal after the attack terminated. On auscultation, during the attack, the first sound of the heart could not be distinguished from the second.



CASE XIV.

Case XV.—A man, aet. 21 years—chronic nephritis and mitral disease. This case is an example of excessive hyperdicrotism, which nearly equals the primary up-stroke. The pulse was counted by the attendant twice as rapidly as it really was. The sphygmograph showed its true rate.



CASE XV

A CASE OF PROBABLE MILIARY TUBERCULOSIS. *

By Augustus A. Eshner, M. D.

Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital; etc.

J. C., a colored man, thirty-two years old, was admitted to the medical department of the Philadelphia Hospital, June 24, 1897, complaining especially of general weakness. He had been feeling badly for about four weeks, being compelled to cease work as a laborer. His bowels had been constipated, and to a dose of castor-oil, taken to secure relief, the patient attributed the origin of his symptoms. With the weakness was associated vertigo, and vomiting occurred from time to time. The family history was unimportant. In addition to measles, chicken-pox and whooping-cough, the patient had suffered from malarial fever as a boy. He had used alcohol freely, and tobacco not at all, and he denied any venereal infection.

Physical examination failed to disclose alteration in area of cardiac, hepatic, or splenic, percussion-dullness, and the pulmonary resonance was preserved. The first sound of the heart was dull and lacking in definition ; the second was accentuated ; the respiratory sound was roughened anteriorly and posteriorly. Manipulation in the right ileo-cecal region induced only a suggestion of pain, and slight tympanites was present. The temperature was 101° F. on admission; the pulse, 90 ; the respiration, 36.

A tentative diagnosis of typhoid fever was made ; gr. v of calomel administered; and cold plunging directed every three hours if the temperature reached 102.5° F. The urine was found to be free from albumin and sugar, and it failed to yield the diazo-reaction. Tubercle-bacilli could not be found in the sputum. A specimen of blood sent to the Bacteriological Department of the Board of Health brought report of a positive reaction to the Gruber-Widal serum-test, but the subsequent specimens brought back negative reports. It was learned that the original statement was incorrect by reason of a clerical error.

The temperature ranged between 101° F. and 103° F., being favorably influenced by the baths that were required from time to time. Frequency of pulse and respiration gradually subsided, but the persistent elevation of temperature, the continued and progressive weakness, in spite of a rather generous diet, the virtual exclusion of any likelihood of the existence of typhoid as time went on, and finally the correction of the misapprehension with regard to the serum-reaction made us consider the probability of miliary tuberculosis. There was but little cough, and repeated examinations of the scanty sputum, as well as of the blood, failed to disclose the presence of tubercle-bacilli.

* Read before the Section of Medicine of the College of Physicians of Phila. Feb. 14, 1898.

The physical conditions in the lungs were carefully watched, and after five weeks impaired resonance became appreciable below the right clavicle, with increased harshness of breathing, and a few crepitant rales were heard posteriorly. The plunges, which the patient had hitherto rather enjoyed, now became unpleasant, and they were accordingly discontinued, the temperature ranging between 101° F. and 103° F.

An abscess, noticed at this time, about the size of a pigeon's egg, above the right heel, was found to contain yellowish cheesy pus, in which, however, no tubercle-bacilli could be found. Another patient in the same ward, believed to be suffering from typhoid fever associated with pulmonary tuberculosis and nephritis, and who also was being bathed at the same time, developed several subcutaneous abscesses of similar character, so that it seems probable that this infection was secondary and of extraneous origin.

The mental condition became apathetic, although there was gritting of the teeth and moaning by the patient. Later there was mental wandering, and at times, noisy, well-marked delirium. Retraction of the head developed, the vesical and rectal sphincters became in turn incompetent, and death ensued on August 17th, amid signs of gradual failure of the vital forces. Through a most unfortunate accident, an autopsy was not secured.

My ultimate conclusion was that the case was one of miliary tuberculosis, with eventual involvement of the cerebral meninges, but in the absence of demonstrative evidence the diagnosis must be considered as only within the range of probability. I fail to find any note as to examination of the fundus oculi, with the possibility of detecting tubercles in the choroid, and I am unable to state from memory whether or not this examination was made. Neither was there appreciable the tactile crepitus sometimes observed when the pleura is the seat of the miliary tubercles. As the report shows, the case was at first looked upon as one of typhoid fever, the diagnosis, in the absence of headache, epistaxis, diarrhea, enlargement of the spleen, being reached largely by exclusion. It appeared to be confirmed by the results of the blood-examination, but our suspicions as to its accuracy were aroused even before the clinical error in this connection was corrected. While the further course of the case pointed to the likelihood of miliary tuberculosis, it cannot be held that such a diagnosis was established beyond doubt. It is deeply to be deplored that the opportunity for postmortem examination was lost.

The case illustrates the difficulty often encountered in diagnosticating miliary tuberculosis. The onset is commonly insidious, the symptoms undistinctive, the similarity to typhoid fever deceptively marked. Cough may be long absent; even, if present, tubercle-bacilli may not be found in the sputum. The physical signs are inconclusive; at most there may be slight roughening of the respiratory murmur. The temperature, however, while usually elevated, is prone to be irregular; rarely it undergoes no rise. The general condition is likely to be typhoid. Epistaxis is not wont to occur. Headache may be present if the men-

inges are involved; diarrhea, if the bowel. The discrimination between miliary tuberculosis and typhoid fever may fail to be made until, in the absence of complications, defervescence fails to take place and the general symptoms to ameliorate after a reasonable time. Now, too, there may be found physical signs that strengthen the suspicion that will probably already have arisen, and the further course of the case will leave little doubt as to the nature of the case. Unfortunately the diazo-reaction may be elicited in a case of tuberculosis; and occasionally the Gruber-Widal serum-reaction may be wanting in a case of typhoid fever.

And after all has been said the diagnosis may remain undecided to the last, and further, it is not to be forgotten that miliary tuberculosis and typhoid fever may coexist in the same patient.

REVIEW OF MEDICINE.

MEDICINE.

The Annus Medicus 1897. (*The Lancet, December 25, 1898.*)

The year has perhaps been more than usually prolific in contributions to medicine. It has been marked by assemblages of congresses and associations in which many burning questions have been discussed. It has also witnessed the output in exceptional number, and in almost every civilized country, of encyclopedic works on medicine for which there must be an insatiable demand. Nevertheless it would be difficult to state precisely in what respects the medicine of to-day is superior to that of the corresponding day of 1896. The advance—such as it is—cannot be measured in this manner, and although in deference to long established custom it is perhaps well to indicate in what direction medical thought and practice are mainly extending it must be left to the future to decide how far the apparent gains are real and substantial. It may, however, be granted that progress is less evident in applied medicine—in what we term the "art of healing"—than in the experimental direction. For some years past we have been accustomed to look for the chief additions to knowledge from the laboratory rather than from the bedside. Clinical observation, aided as it has been by scientific instruments and appliances, is of course not exhausted, but its sphere of novelty is certainly much more restricted than it was when the stethoscope and ophthalmoscope were first placed in the physician's hands. But on the other hand the field open to the laboratory investigator is still of wide extent, the fruits of his labors to practical medicine, although yearly increasing, being yet comparatively limited. Amongst examples of recent work which illustrates progress in this direction may be cited that by

Haffkine on the bubonic plague, the prevalence of which in Bombay and other parts of India has been the most striking epidemiologic fact of the year; the discovery by Sanarelli of the bacillus of yellow fever; the extension given to serum-theraputics, especially in the use of anti-streptococcic serum in septic diseases and of antitoxin in diphtheria; and the application of the "agglutination test" to the early diagnosis of typhoid fever. The manner of origin and spread of local epidemics and the conditions that favor them have been exemplified only too well in the outbreaks of typhoid fever which have occurred in various parts of England during the autumn, in the extension of diphtheria in London (probably through school infection), and in the outbreak of beri-beri in the Richmond Asylum, Dublin. The nature of the febrile process has been well discussed by Hale White and has formed the subject of a valuable monograph by Löwit; whilst the treatment of fever, especially from the side of the external application of cold rather than that of the internal administration of antipyretic drugs, has been the subject of many contributions, mainly in America. In other directions the gains to knowledge—pathologic rather than therapeutic—have been shown in the ever-advancing department of neurology where, as Sir W. Gowers has shown, the new conceptions arising out of deeper knowledge of the intimate structure of the nervous system bear directly on the interpretation of its disorders. The studies upon aphasia by Charlton Bastian and Byrom Bramwell exemplify the profundity and intricacy of cerebral functions, whilst, too, attention is being daily directed to the phenomena of the so-called "functional" disturbances of the nervous system such as hysteria and neurasthenia. Gout and rheumatism, as of yore, have claimed a no small share of attention. Chronic rheumatic disorders were discussed fully at the Berlin meeting of the Association of Internal Medicine in the spring and again at the Montreal meeting of the British Medical Association, whilst Dr. Luff's lectures at the Royal College of Physicians of London dealt with some moot points in the chemical pathology of gout, and a welcome addition to its literature has been made by Dr. W. Ewart. Cardiac diseases have also been fully dwelt upon—although there has been a not unwelcome respite from the advocacy of special therapeutic measures that within recent years have rather monopolized attention. The publication of Sir W. Broadbent's work is noticeable for the reasonableness and lucidity with which the subject of heart-disease is expounded in it. The subject of tuberculosis has gained a new impetus from the institution of the Weber-Parkes Prize at the Royal College of Physicians of London; and yet, unless we include the "new tuberculin," no material addition has been made to the well-recognized principles of treatment of the local manifestations of this widespread infective disease. Prophylaxis has been urged and in some places carried out with no little rigidity, although the task of attempting to control the prevalence of human tuberculosis under the conditions of life that prevail in overgrown and crowded cities might well appal all but the most sanguine enthusiasts. Gastro-intestinal disorders and their secondary effects afford am-

ple scope for further observation, and we may gratefully recognize the gains to practice which are accruing from the recognition of the part played by the ingesta in determining many of those catarrhal and ulcerative conditions that depend on bacterial agencies. Lastly, note should be taken of the still increasing scope for relief of abdominal affections that are beyond the aid of purely internal medication which is afforded by surgery, as witnessed in the suture of gastric ulcers, and the relief of intussusception, the removal of gall-stones and of abdominal cysts and tumors.

The Vis Medicatrix Naturæ in Disease of the Kidneys. (*Lancet, December 11, 1897.*) By Arthur T. Wilkinson, B. A., B. Sc., M. D., London.

The author describes the Vis Medicatrix Naturæ as "not only a power, a vital resistance to disease, but an inherited organized resistance." He emphasizes the fact that this power is one which we do not fully comprehend. He considers it one of the most important duties of the physician to determine the therapeutic value of the symptoms of disease, which are in reality protective processes. Disease of the kidneys is revealed first by urinary changes, namely, by an increase or deficiency of the normal ingredients, and by an occurrence of abnormal ingredients such as blood, albumin, casts, renal and pus cells; and second, by the constitutional manifestations of defective excretion such as high arterial tension, dropsy, cardiac and ocular changes. Where kidney disease is unilateral the healthy kidney is capable of properly disposing of the nitrogenous excreta of the body, and where both kidneys are partially diseased, leaving an amount of secreting structure equivalent to one healthy kidney, there may not follow any signs of renal retention. Thus in scarlet fever he believes that many of the cases of contracted kidney which occur in middle life have probably had their origin in an unrecognized post-scarlatinal nephritis. Certain interstitial processes have been left which have gradually augmented, interfering to some extent with the secretory powers of the kidney, but for years never to the point of causing any constitutional discomfort. Some of these cases remain stationary, giving rise throughout a lifetime to only a moderate amount of albuminuria.

The absence of high arterial tension and cardio-arterial changes in these cases merely signifies that only a portion of the secreting structure of the kidneys is as yet involved. When the kidneys have passed beyond the point at which there is sufficient secreting area, the author considers increased arterial pressure the first sign to manifest itself. He believes that the arterial system is involved from heart to capillaries. He cannot accept the opinion that high tension is itself a cause of renal trouble. This increased tension he considers an attempt at excretion, consequently a physiologic rather than a pathologic condition. The success of the system to come to the assistance of the kidneys varies greatly. The Vis Medicatrix Naturæ may be ill-developed or the system may be occupied with the febrile process. If the system fails to come to the rescue, the absence of high tension, renal dropsy, etc., may be a bad

omen. He thinks it proper therefore before promoting elimination in other ways to endeavor to re-establish renal excretion by the application of cups to the loins, the internal administration of digitalis and saline diuretics, always, however, remembering that high tension may become morbid in quantity. If the increased tension is not of sufficient aid in the process of excretion, there occurs that acute primary dropsy of arterial origin which is associated with high vascular tension. It is an excretion into the body. The products of the metabolism which accumulate in the blood not being eliminated by the kidneys turn into the indifferent connective tissues of the body where there is ample accommodation without serious detriment to the system. Only when renal dropsy chooses a vital organ, such as the lungs, larynx, or brain, does it become a dangerous element. He warns against undue dehydration, lest there occurs a concentration of the poison in the system; therefore with the administration of purgatives and diaphoretics he advises the use of large draughts of water. The author calls attention to a form of dropsy occurring in patients subject to alcoholic excess which is an accompaniment of high arterial tension, and closely allied to the primary dropsy occurring in Bright's disease. This dropsy is not associated with the albuminuria. He believes that the hypertrophy and dilatation of the heart "is at first chiefly muscular and truly conservative, and that its degree depends largely on the length of time spent in its production. The Vis Medicatrix Naturæ thus protects the system against undue dilatation whilst securing excretion." These cardio-arterial changes are dependent upon a prolonged high tension—a chronic attempt at excretion. They do not necessarily depend upon chronic inflammation of the kidneys. Any change which diminishes renal excretion, thus leaving in the blood an excess of excrementitious material, may in the course of time produce the same cardio-vascular changes as the coarser inflammatory renal changes. Thus it is that we have the senile changes of this nature.

The high tension of chronic Bright's disease and allied states is an effort at excretion, and results in diuresis. The author thinks that the diuretic properties of the ordinary urinary constituents probably help to bring about the high tension in renal failure. In acute Bright's disease with dropsy, occurrence of diuresis is a favorable sign. It indicates that the active elements are capable of responding to the solicitation of excretion, and it does not indicate any interstitial change. "In chronic disease diuresis is at the same time a sign of weakness and an evidence of strength." It shows a deficiency of healthy renal tissue, and also a cardio-arterial system capable of aiding the remaining healthy cells and glomeruli in carrying on their extra work. He does not believe that diuresis is limited to the cases developing renal fibrosis. In chronic Bright's disease the relation between the cardio-arterial system and kidneys which secures diuresis must be sustained. In its later stages when the arteries are hardened and the heart-muscle degenerated, high arterial tension must be overcome on account of the possibility of heart-failure, apoplexy, eye-changes, and uremia. The author frequently uses strychnia with potas-

sium bromid in cerebral cases. He believes the liability of digitalis to raise the arterial pressure by an increase in the peripheral resistance may be overcome by the administration of potassium iodid. Thus in cases of cardiac failure the advantages of this drug can be obtained. He believes that the Vis Medicatrix Naturæ suggest the advisability of close attention to the condition of the gastro-intestinal tract, and of utilizing it as a means of aiding in elimination.

S. McC. Hamill.

Pneumonia a Multiple Infection. (*British Medical Journal, January 15, 1898.* By J. W. Moore, M. D., M. Ch., (Dublin.)

Moore, in this article, quotes from Thompson, of the Bellevue Hospital, to prove that lobar pneumonia is a mixed infection. Thompson claims that the onset now is just as sudden as it ever was, yet the date of the crisis has come to be so indefinite and suspicious that the visitation of the severe epidemic of influenza of 1890-91 may have given rise to this mixed infection. In a series of cases reported at the Bellevue Hospital he noticed a change of type in lobar pneumonia, and out of eleven cases only three had a partial crisis, and in five there was no crisis at all. Moore then reviews the literature of the nomenclature of the pneumococcus (Friedlander's bacillus), but gives the honor of discovery to Sternberg, who found the organism in the blood of rabbits after inoculation with his own saliva in his experiments in the year 1880. He then quotes from Flugge, who upholds him in his claim that the bacillus of Friedlander is not the sole cause of the pneumonic process. We are already acquainted with pneumonia caused by the aspergillus and actinomyces; it is a priori not improbable that also among bacteria there are many other species which can set up pneumonia. He then adduces evidence to prove that the organisms of erysipelas, influenza, Eberth bacillus, anthrax, etc., may all give rise to a specific pneumonia.

Pneumonia from the germ of erysipelas.—A case of erysipelas occurred at the Cork Street Fever Hospital, in which a patient was suffering with pneumonia migrans. After a few days a flush of erysipelas developed over one shoulder and spread down the back, the pneumonic process subsiding pari passu.

Pneumonia due to the influenza bacillus.—The pneumonia of influenza while producing the ordinary physical signs of acute croupous pneumonia is often latent in its course or accompanied by a profuse muco-purulent expectoration with scarcely any rusty sputa. Leyden (1890) investigated the sputum of these cases, and found there were three kinds of microbes: (1) diplococci of Frankel; (2) strepococci; (3) staphylococci; and he believed the forms of pneumonia to be different. Ribbert pointed out a difference in the pathologic process from that of croupous pneumonia, to wit; the cut surface of the hepatized lower lobe presented a smooth appearance, the exudation being soft, very rich in cells and poor in fibrin (hypinosia). The culture showed only streptococci.

Pneumonia from Eberth bacillus.—Speaking of the pneumonia developing during an attack of typhoid fever he observes a close relation existing between the evasion of the bacillus typhosus and the inflammatory condition of the lung, and that whereas it has been denied by Eberth that such infection through the lungs has been proven, it by no means proves that the specific poison of the microorganism may not spend its force where there is least resistance, whether it be a microorganism or a toxin developed from it. In evidence of this view he reports two interesting cases to prove the pulmonic element in enteric fever.

Pneumonia from the anthrax bacillus.—Buchner caused mice and guinea-pigs to breathe an atmosphere containing in suspension a powder consisting of dried anthrax spores mixed with lycopodium powder and charcoal. In a series of sixty-six experiments fifty animals died of anthrax, and nine of pneumonia; seven survived. Microscopic section of the lungs showed the tissues to be extensively invaded.

WOLDERT.

Contribution to the Physiology of the Supra-renal Capsules. (*Pflueger's Archiv., vol. 67, H., 9-10, 1897.*) By Biedl.

In order to determine the alterations in the circulation of the suprarenal capsules that could be produced by stimulation of the splanchnic nerves or other methods, the author ties the ascending cava above and below the entrance of the adrenal veins. Any veins that enter the large vessel and could be included between the ligatures are separately tied. A cannula is then inserted into the cava, and the blood conveyed by a tube whose nozzle is suspended over a small drum. The drops falling on this are recorded separately on smoked paper. The general arterial pressure was increased by injection of extract of the suprarenal bodies. It was found that under these circumstances the drops became more numerous in the given period of time, not only from the veins leading from the capsules, but also from the renal and femoral veins; showing that the alteration was purely mechanical; and the same result was found when the blood-pressure was increased by any other method, such as the interruption of artificial respiration. If both splanchnic nerves were stimulated continuously, it was found that during the first 6 or 9 seconds no change in the number of drops occurred—after this there was an extraordinary increase, showing that vasodilatation must have taken place. The question then arose whether this vasodilatation could be due to the increased amount of blood-pressure or to active dilated fibres in the splanchnic nerves. As the change occurred so promptly after the irritation, Biedl concludes that the only possible explanation of the hyperemia is that active distension of the blood vessels was induced by the irritation. The proof of this is found in the following experiment: If the rami suprarenalis of the splanchnic nerve are cut after it emerges from the diaphragm, and then the nerve stimulated in its thoracic region, the arterial pressure is increased, but the hyperemia of the suprarenal bodies

does not appear. If, however, the suprarenal branches are stimulated, the hyperemia appears without the general increase of blood-pressure.

From the review of the literature, Biedl is inclined to believe that the vasodilator fibres originate in the anterior roots of the lower dorsal cord. It remained to discover the course of the vasoconstrictor fibres whose presence is manifest when suprarenal extract is injected into the body. This, however, could not be accomplished; contraction of the vessels of the suprarenal bodies and retardation of the blood stream could not be caused by stimulation of the vagus, splanchnic nerve, nor the roots of the spinal cord. The last factor in the innervations of these organs appears to be the presence of fibres affecting the secretion. Accepting the results of Cybulinski's experiments, who claims that an active substance is found in the blood of the veins coming from the gland and not going to them, Biedl undertook a careful study of this blood. He found that the red and white corpuscles were normal as regards number; in addition there were a number of clear yellow bright granules that seemed to be abnormal constituents, and these sometimes were found in masses. These granules were very similar to blood plaques or fragments of red blood cells. If the splanchnics were stimulated for a considerable length of time, it was found that the leukocytes were very much diminished in number, and at the same time the granules also became less numerous. Injection of this blood showed that it contained the active substance of the suprarenal capsules, causing a characteristic alteration in the blood and pulse-curve of animals into which it had been injected. If, however, these injections were repeated, they gradually lost their effect. Various poisons were given in the course of the experiments, particularly atropin, in order to discover whether they influenced the character or quantity of the secretion, but it was found that they did not. Biedl, nevertheless, does not conclude that there are no secretory nerves of the suprarenal bodies, but rather, whilst admitting his inability to demonstrate the fact, is convinced that secretory fibres, as well as vasodilators are present in the splanchnic nerves.

SAILER.

The Chemical Analysis of the Gastric Contents. 1. Method of Analysis for Use in Clinical Work. 2. Record of the Analysis of the Gastric Contents of Fifty Healthy Individuals. (*Boston Medical and Surgical Journal, November 25, and December 2, 1897.*) By Henry F. Hewes, M. D.

Part I. furnishes a useful summary of the more usual methods of analyzing the stomach contents. An original observation in this part of the paper is based upon the chemical examination of the stomach-contents in 15 cases one hour after a test-breakfast (Ewald), and then again in 15 other cases at the end of an hour and a half after the same kind of meals. The results were practically identical, and from this fact the author infers that the stomach-contents after the Ewald breakfast may be taken up at convenience at any time between one hour and one hour and a half after the meal. The experience of others does not fully accord

with this, but the variations in results because of such differences in the duration of the digestive period are rarely enough to be of great significance.

The experiments recorded in Part II. of the paper are highly interesting and important. They were made upon fifty students in the Harvard Medical School who were between the ages of seventeen and thirty. These young men "had no symptoms of digestive disturbance at the time, and presented no history of chronic or intermittent dyspepsia." They were given the Ewald test-breakfast, and the stomach-contents were obtained by expression at the end of an hour. The chief interest centers in the quantitative examinations of the principal ingredients in the filtered contents. These gave the following means:

Total acidity of the filtrate	2.04 gm.
Total free hydrochloric acid	1.07 gm.
Total combined hydrochloric acid	0.41 gm.
Total hydrochloric acid	1.48 gm.
Total organic acids and acid salts	0.56 gm.

It was slightly inaccurate from a scientific standpoint to ignore the fixed chlorides, and assume the sum of the free and loosely combined hydrochloric acid to represent the total hydrochloric acid present; but from the clinical point of view this was substantially correct. Authorities have differed considerably as to what constitutes normal averages of hydrochloric acid secretion, and if it were certain that these fifty young men were all in perfect health at the time of the tests the results in such a large series of cases would have been well-nigh conclusive. But medical students are brain-workers, who as a rule take little or no exercise, and live away from home in boarding-houses under conditions which in various respects are often the reverse of healthful. It is safe to assume that of fifty men living under such conditions, a considerable proportion have a moderate degree of hyperchlorhydria, which as is well known, by no means always produces symptoms in the beginning. Before it can be finally decided exactly what the normal average of hydrochloric acid secretion is in the healthy stomach, it will be necessary to take a number of persons who have been found after the proper examinations to be in good health, and have them live for a week or two at least previous to the test under strictly hygienic rules, including avoidance of all undue strain both mental and physical, as well as upon a rational mixed diet, since experiments upon both animals and men have shown that a nitrogenous diet largely increases the secretion of hydrochloric acid, while a diet of milk and vegetables markedly reduces such secretion.

BOARDMAN REED.

On Pepsin Secretion in the Normal Stomach. (*Zeitsch. f. klin. Med., Bd. 33, Heft. 5 and 6.*) By Dr. A. Schule, of Freiburg.

The author has used the method devised by Hammerschlag for the estimation of the peptonizing power of the gastric juice, in the investigation of the questions: (1) How great is the peptonizing power of the

gastric juice at the height of digestion? (2) What is the effect of various ingesta upon pepsin-secreting glands? The peptonizing power at the height of digestion in cases showing fairly normal total acid and free HCl varied after a test-breakfast from 44 to 78 per cent. (after Hammerschlag). The average was 74 per cent. After a test-dinner it ranged from 54 to 84 per cent., with an average of 75 per cent., while after a milk and flour soup the average was 72 per cent. A good general average is 60-70 per cent. Hence the various kinds of ingesta had no appreciable effect. Two healthy persons were examined every fifteen minutes after test-meals to see the changes in peptonizing power during the course of digestion. This showed that it rose in the early part of digestion, and fell in the latter part nearly in the same curve as the total acidity and free HCl. The presence of peptic action in a case of the author's corresponds with Oppler's statement that absence of peptic action is not a constant and pathognomonic sign of cancer.

EDSALL.

Gastric Catarrh. (*Zeitsch. f. klin. Med., Bd. 32, Heft. 5 and 6.*) By Prof. P. M. Popoff, of Moscow.

The view that inflammatory changes in the stomach are accompanied by decreased secretion of HCl has been almost constantly expressed since Baumont's experiments. Popoff has undertaken the determination of the condition of the gastric secretions in gastritis experimentally produced, led thereto by the controversy between those who believed that subacidity always existed and others who contend that hyperacidity may be found.

As irritants he used phosphorus, tartar-emetic, corrosive sublimate, croton oil, and alcohol, and gives the results of experiments on six dogs continued over from two to thirty-six days. In all cases the stomach-contents were examined during the animals' lives and after death, and microscopic examinations of the mucous membranes were made. In each examination HCl reactions were brilliant, and the contents and macerated mucous membrane had a lively peptic action. The histologic examination showed various grades of inflammatory changes. Mitotic figures were frequent, moderate irritation caused the pictures in the glandular cells described as typical of the sixth to ninth hour of digestive activity, or in other words, heightened digestive activity; further irritation caused vacuolation and degeneration of the principal cells, with active hyperplasia of the parietal cells. The interstitial tissues took part in earlier grades, showing widened blood vessels and round-cell infiltration, later irritation increasing these changes and causing tortuosity of the vessels, increased number of leukocytes, kariokinesis, and, finally, even abscess-formation.

He concludes from his experiments that we must divide inflammatory changes in the gastric mucosa into two forms, the parenchymatous and interstitial, and that in the parenchymatous form, there is hyperplasia of the parietal cells, with fatty degeneration and destruction of the principal

cells, while the glands have the appearance of active functionation, and this form is accompanied by hypersecretion. Such is the form common in gastrectasia, ulcer, and often in alcoholic gastritis. The hypersecretion is not due to a neurosis, but to the inflammation. The interstitial form is an advanced stage and, by pressure upon the glands and resulting mucoid degeneration, causes subacidity. Such a division corresponds to inflammation to other glands, and explains for example the disappearance of hypersecretion in gastric ulcer, the early parenchymatous gastritis accompanying the ulcer becoming finally interstitial. It would also offer an explanation for the greater frequency of an acidity with scirrhous than with other forms of carcinoma, since the firm tissue of the scirrhous tends to infiltrate the mucosa and compress the glands. He thinks, too, that this view of gastritis would limit the term nervous dyspepsia, and lead to the inclusion under gastritis of many cases previously thought to be nervous hyperacidity.

EDSALL.

THERAPEUTICS.

On Artificial Food Preparations. (*Berl. klin. Woch. 1897, No. 26.*) By Prof. G. Klemperer, of Berlin.

The author gives a useful review of the artificial food-stuffs, considering them in regard to their actual value as nourishment. The partially predigested proteid-preparations, formerly called peptones, are now recognized as albumoses, since they contain but little peptone and much albumose. They are of course given to spare the stomach the necessity for digestion. This is, however, unnecessary, as even in extremely weak conditions the stomach is able to perform its peptonizing work, and if it is unable the intestine will accomplish it—if native albumens be ingested in soluble or well-divided form. Nutrose and eukasin are good preparations of soluble albumen, and are well borne, but ordinary dried meat and egg-albumen well pulverized are quite as valuable. All these food-stuffs are merely illusions if they be taken by the teaspoonful, as more than three teaspoonfuls are rarely taken in the day. We need 30 to 40 grams of albumen daily, and in the syrupy "peptone" preparations we get but three to four grams to the teaspoonful of dry preparations of albumens. Somatose contains 9 grams to the same measure, equaling 33 calories. Contrasted to this one egg or 100 c. c. of milk furnishes 70 calories, and how much cheaper the latter are! Nutrose and eukasin provide more energy than somatose or peptones, but it is rarely necessary to order the artificial preparations. They contain no nucleins, however, which produce uric acid, and for this reason they are useful in gouty conditions, and with somatose and casein are free from irritating extractives, and therefore all these may be given in nephritis. Of the meat extracts all that can be said is that they increase the appetite, and provide a minimum of nourishment. Valentine's contains about 1½ grams of albumen to the teaspoonful. Puro is much more useful, as it

contains 33 per cent. proteids. It is nevertheless, in the quantities usually given, of little use as nourishment. Of the carbohydrate-preparations, such as Knorr's or Hartenstein's, more may be said in praise. But it must be remembered that soups made of these contain in general about one-fourth the nourishment in the same amount of milk. They are of value when milk is not well borne. Of the use of predigested starches, the author says we must remember that salivary digestion is scarcely ever lost, and that even should it be, we have the pancreatic juice and bacterial action in the intestines, and so the necessity for predigested starches rarely arises, and their very high price almost excludes them from use. Malt extract is very useful, since it contains so much sugar and dextrin. A tablespoonful equals an egg in nourishment contained. Some natural carbohydrates are much cheaper, however, and quite as valuable. Honey he mentions as most useful, and especially valuable with diabetes, owing to its high percentage of levulose. Of fats we have in nature, butter, cream, egg-yolk, caviar, and oils. Such preparations as lipanin are unnecessary, as there exists scarcely a disease in which the fat-digesting power falls below the percentage which these preparations exhibit in predigested fats.

EDSALL.

Notes Upon the Antiseptic and Therapeutic Action of the Silicate of the Alkalies, and the Mineral Waters Containing Them. (*La Presse Medicale Belge, December, 1897.*) By Dr. Jules Felix and Prof. M. P. Coremans.

The authors report several cases; the first being a young man, 21 years of age, who had suffered from blenorrhea for six months, in which other irrigations had failed, but a radical cure was obtained by the use of silicate irrigations. The second, a case of acute urethritis of six days' standing, was relieved in fifteen days. The third was a case of a young girl, 8 years old, scrofulous, and rachitic, with an ulcerative kerato-conjunctivitis and purulent discharge of about two years' duration, causing an intense photophobia. Her limbs were much bent, especially the left, which made walking impossible. Iodid of iron and glycophosphate of lime were prescribed in conjunction with careful diet and gymnastics. Orthopedic treatment consisted of braces which completely straightened the limbs, and in about eighteen months she could walk two miles without distress. During the first six months the treatment of the eyes seemed to give but little relief, until the silicates were tried. The eyes were frequently washed with a solution of silicate of potassium and sodium (gram 2) dissolved in 1000 c. c. of distilled and sterilized water, with compresses of the same at night; in about fifteen days the improvement was easily noticeable, and the photophobia much less; eight months afterwards the child was sent to school, with dark glasses; treatment was continued six months longer, when all signs of former ulcers had healed, and the discharge had ceased.

The fourth case was in a girl, 21 years of age, who for a long time had suffered from a chronic conjunctivitis with a muco-purulent dis-

charge, and considerable swelling and redness of the conjunctiva. A 2 per cent. solution of the silicates of the alkalies (sterilized) was used, but it was too strong, and produced more inflammation and considerable photophobia; it was reduced to 2 grams to 1000 c. c., and at this strength soon gave relief. The fifth case was in a boy, 6 years old, suffering from coxalgia. A large abscess was opened, and about a quarter of a liter of pus escaped. The cavity was washed with sublimate (1 to 1000), and packed. There was considerable discharge at each dressing, until the solution was changed to gram 1 of silicate of soda and potassa, 1 to 1000 c. c. of sterilized water. The irrigations gave less pain, and suppuration diminished perceptibly, and rapid recovery followed. The sixth case was in a fourteen months' old child, with eczema of the face. Washing the face with a solution 2 grams to 1000, and compresses of the same, cured it in six days.

From these observations it is concluded: (1) That the antiseptic, antifermentable and antiputrescent properties of hot mineral waters are due to the amount of alkaline silicates held by them. 2. That a solution of silicates of the alkalies in distilled water, sterilized, of not greater strength than 2 grams per 1000, has the same therapeutic value as the natural waters. 3. The importance of this therapeutic action in these waters has not received enough attention from the physician, surgeon, and hygienist. 4. In gouty subjects, when taken inwardly, they will reduce the amount of the uric acid deposits. 5. That this antifermentable and antipurescent effect can be obtained without producing any toxic symptoms, as has been proven in the laboratory by experiments upon animals, and when taken internally the silicates are well borne by the stomach. 6. That these clinical observations have been confirmed by experiments conducted by Prof. M. P. Coremans in the Laboratory of Hygiene, University of Brussels.

The best strength is 2 grams to 1000 c. c. In surgery it does not destroy the instruments like bichlorid of mercury, and not endanger the operator to poisoning as does carbolic acid.

To prove the nontoxic effect Prof. Coremans injected 1 c. c. of 1, 2, and 3 per cent. solution into rabbits and guinea-pigs without producing any effect whatever. Upon bacteria it was found that in bouillon mixed with 1, 2, and 3 per cent. solutions in the following manner—7 c. c. bouillon with 3 c. c. of silicate solution, 8 c. c. with 2 c. c., 9 c. c. with 1 c. c., and put in an incubator, cultures of staphylococci, bacillus coli and anthrax were rendered sterile. Tetanus needed more time than the preceding, but the solutions had no effect upon the bacillus subtilis.

NEWCOMET.

SURGERY.

Annus Medicus, 1897. (*Lancet, December 25, 1897.*)

During the past year the progress of surgery, if not so exceptionally great as in some other years, has been evident. In the surgery of the

abdomen the question of the best method of uniting a divided bowel is still unsettled. Murphy's buttons, while not perhaps retaining all the favor which they had on their first introduction, are still looked upon by many as on the whole the safest as well as unquestionably the most rapid method of effecting intestinal anastomosis. That some at least of the unfortunate results which have followed the use of the button have been due to its incorrect application is extremely probable, as the best results have been obtained by those who employ it most frequently. One danger from the use of the anastomotic button is the tendency it has to remain in the bowel. This has happened many times and generally without ill effect, but occasionally symptoms of intestinal obstruction have resulted. To obviate this danger Dr. Martin Gil, of Malaga, has devised a button which resembles Murphy's in some respects, but it consists of decalcified ivory, so that it can be dissolved by the digestive juices after having accomplished its work of uniting the bowel. Dr. Gil has employed the method with success in dogs, but the button has not yet been used on the human body. Those who decline to avail themselves of the anastomotic button either employ some form of "bone bobbins" such as that invented by Mr. Mayo Robson or trust to simple stitching without mechanical aids. The fact that every one of the methods mentioned gives excellent results and is extensively employed shows that a skilful and experienced surgeon can safely unite divided intestine by any of them and that he may be expected to attain the greatest success by using that method with which he is most acquainted. Even in the future we must not look for a complete discarding of any of these methods unless some new modification may render one of them unquestionably superior to its rivals.

The question of the treatment of intussusception is of exceeding importance. In days before aseptic operations were possible it was natural that the surgeon should endeavor to avoid if possible opening the peritoneal cavity, and therefore heroic efforts were made to reduce the intussusception without operation. Injection and inflation were extensively and in fact practically exclusively used, but the results were by no means satisfactory; it was found that a very large proportion of the children died; and indeed it is now obvious from a closer study of the anatomy of the disease that in many of the cases it is utterly impossible that injection or inflation should reduce the invaginated bowel. All intussusceptions confined to the small intestine and all those of the ileocolic variety cannot possibly be returned by either of these methods, and even if the intussusception should involve only the large intestine or be of the ileo-cecal form it frequently happens that it cannot be completely reduced though apparently it has all been returned and consequently the condition recurs a few hours later. It is, moreover, only in cases seen at an early date in which injection or inflation can be of any use, for nearly always inflammatory adhesions have formed within thirty-six hours of the onset. It is not therefore surprising that laparotomy

should have been resorted to in the hope that it would prove a more satisfactory form of treatment. Laparotomy for intussusception is, however, no new introduction, for it was performed in 1828 by Gerson, of Hamburg. Unfortunately the child died from rupture of the gangrenous bowel. The Hunterian lectures by Mr. D'Arcy Power on the Pathology and Surgery of Intussusception were a valuable contribution to the subject, and a paper by Dr. F. H. Wiggin, of New York, contained notes of 103 cases which he had collected of intussusception in children. These were classified according to the treatment adopted and the irresistible conclusion was arrived at that the delay resulting from attempts at reduction by injection or inflation was often responsible for the fatal result of a laparotomy and that the best chance for the child was obtainable by an early laparotomy. In this opinion most surgeons will concur. Mr. R. Lawford Knaggs, of Leeds, described two successful cases of laparotomy for this condition; Mr. Bernard Pitts recorded seven consecutive cases of intussusception in infants treated by abdominal section with six recoveries; and Mr. A. E. Barker read a paper before the Clinical Society of London on fifteen consecutive cases of this morbid condition. The conclusion to be gathered from all the cases is that in patients seen early and untreated by injection or inflation laparotomy offers a great probability of a successful result.

The prognosis in cases of perforation in typhoid fever is extremely grave; without surgical interference death is almost certain, but laparotomy offers a chance of recovery. Dr. J. M. T. Finney, of Baltimore, has collected forty-seven cases of perforation from typhoid ulceration in which abdominal section has been performed; of these thirteen patients recovered, and though this proportion is probably too high, as successful cases are always more frequently recorded than those which have proved fatal, yet even after allowing for this the result is very good. The best time for operating seems to be when the patient has recovered from the shock attending the perforation.

A successful case of surgical treatment for rupture of the liver has been recorded by Mr. Christopher Martin, of Birmingham. The patient, a coal-miner, nineteen years old, was crushed between two trucks, and apart from the shock of the injury no abdominal symptoms appeared for sixteen hours, when he had severe abdominal pain, a distended abdomen, and dyspnea. Thirty hours after the accident laparotomy was performed, and a very large quantity of blood-clot was found in the peritoneal cavity and a tear between one and two inches deep was seen on the under surface of the right lobe of the liver. The abdomen was washed out and drained with a glass tube, a second drainage tube also being inserted just above the pubes. The patient developed symptoms of pneumonia but ultimately he recovered completely.

There is considerable diversity of opinion as to the best method of treatment of general suppurative peritonitis. Some surgeons think that no surgical procedure is of any value in the treatment of this condition

and that a fatal result is certain. Flushing the peritoneal cavity finds favor with others, while incision and evacuation of the fluid, with or without drainage, are also advocated. It has been pointed out that the heavy mortality which follows flushing is in part due to the fact that the septic exudation on the peritoneum cannot be removed by a stream of water, and therefore Dr. Finney has practised systematic cleansing of the whole of the peritoneum by pledgets of gauze wrung out of hot salt solution. The method has proved successful in five consecutive cases and is deserving of consideration and trial.

Mr. W. H. Battle has pointed out a symptom of peritonitis which has hitherto not been described. It consists of an edema with tenderness in the groins extending to the scrotum but not extending down the thighs. He has observed it in two patients, and another case has been reported by Mr. R. P. Stephens, of Hove. The symptom seems likely to be of use in some obscure cases.

Probably the most sensational surgical novelty of the year has been the re-introduction of the treatment by forced reduction of spinal curvature due to caries. Though employed from time to time for many years it is only recently that the method has been extensively tried. Dr. Chipault and Dr. Calot, two French surgeons, are the chief advocates of the method, though the former would limit it to those cases in which the reduction can be effected with the exercise of but little force. Dr. Calot has performed "forcible reduction" in a large number of cases and at the Moscow Congress he demonstrated the process by reducing and putting up in plaster six cases in the space of an hour and a quarter. Mr. Robert Jones and Mr. A. H. Tubby performed the operation many times at Liverpool and read a paper on the subject at the Clinical Society of London in November. It cannot be said that the method has met with a very wide acceptance at present in this country; there is a great disposition to await the results of the treatment in those cases to which it has already been applied. There seems to be no doubt that in many instances a very marked spinal curvature may be immediately reduced unless firm bony ankylosis has taken place with very little immediate risk. Paraplegia if present often disappears after the operation and does not seem to have followed the reduction. Paralysis has occurred in at least three cases after the operation, but there has been very little reason to think it has been directly due to the operation, for in cases of caries of spine treated by ordinary methods paralysis occurs in a large percentage, some say 20 per cent. These facts must be freely admitted, but it is quite another thing to acknowledge that these cases are really benefited. The separation of the vertebræ produced by the extension must leave a large gap, which has to be subsequently filled with bony tissue if any real recovery is to result. For this to occur an extended period of fixation is required and until many months have elapsed and there is an opportunity of seeing the final results it would be premature to declare the method a success.

The treatment of chronic enlargement of the prostate by castration or by division of the vas deferens is steadily gaining ground and though untoward results occasionally follow yet it is indisputable that in the majority of cases atrophy of the prostate ensues and the difficulty in micturition is greatly lessened. A further knowledge of the exact pathology and varieties of the enlargement of the gland will doubtlessly enable us to apply this treatment only to those cases to which it is best suited.

It is only of recent years that success in the treatment of tuberculous ulceration of the bladder has been possible and even now cases are rare. An interesting instance of this condition treated by suprapubic cystotomy and curetting was recorded by Mr. Edward Cotterell; recovery was rapid and perfect.

Wounds of the heart are almost always rapidly fatal, but we have recorded two instances during the past year in which life has been saved. In the first a man who was under the care of Dr. Parrozzani, of Rome, was stabbed in the left side and five hours later he was brought to the hospital extremely pallid and with a heart beat barely perceptible. An operation was performed at once. A flap was marked out comprising the whole thickness of the thoracic wall and containing portions of the fifth, sixth, seventh, and eighth ribs. This was turned inwards and the left pleural cavity was found to be filled with blood and an opening an inch in length was seen in the pericardium; the stab had also penetrated the left ventricle and a finger was passed into the cavity. Blood was flowing at each heart-beat from the wounded ventricle. This wound was closed with four stitches and then the pericardial wound was sutured and the skin incision also. The patient recovered completely. The second case was under the care of Dr. S. Prior, of Woodilee Asylum, Lenzie, Glasgow. A man, aged forty-three years, had tried to kill himself previously, and his second attempt was made by pushing an iron pin through the chest-wall a little below and internal to the left nipple; the portion of the pin within the chest measured three inches and the part outside moved up and down every time the heart beat. The pin was withdrawn and no ill-effects followed, the wound healing by first intention.

An account of the surgery of the past year would be incomplete without some account of the present use of the Roentgen rays. Though it is still doubtful what their exact nature may be, yet we can obtain them with more ease and certainty than before. An adjustable vacuum tube has proved very useful. Dr. J. Mackenzie Davidson has devised and described in "The Lancet" of October 16th a very ingenious apparatus by which the exact position of an object photographed by the aid of the Roentgen rays can be determined within a few minutes after the negative is taken. It has been fully tested on the living subject and has proved very accurate. It has become almost a routine practice to use the X-rays in cases of fracture or dislocation in which any doubt exists as to the exact lesion present. Skiagraphy has been also utilized to some extent for renal and vesical calculi and we published a plate from photographs

by Dr. A. P. Laurie and Dr. J. T. Leon of a case of a calculus in the bladder of a boy nine years old; the stone was clearly visible and a plate taken after litholapaxy showed the absence of the calculus. Dr. W. J. Collins removed from the thigh a bullet recognized by the aid of the X-rays; it had been imbedded three years. Dr. W. S. Hedley has shown that if paper or other flexible sensitized surface is used to obtain the skiagram it must be kept quite flat and not bent round the limb or distortions will be shown which do not exist.

Tetanus: Its Geographic Distribution, Its Prophylaxis, and Its Treatment; With Reports of Cases. (*Brooklyn Medical Journal, January, 1898.*) By Charles H. Goodrich, M. D.

Under general geographic considerations the frequency of the disease in the tropics and its infrequency in cold climes was mentioned. Reference was made to the equine theory of the origin of tetanus and its overthrow by experiments in the New Hebrides Islands by Le Dentu. The details of geographic distribution were taken up. Asia was first considered then Africa, Europe, and the British Isles. The districts in South America seemingly infected were then mentioned (Brazil, Argentine Republic, Peru and Ecuador). The fearful prevalence in Cuba, Jamaica, and parts of Hayti were mentioned. In Mexico, Yucatan, and the region about Vera Cruz were indicated as possessing badly infected soil. The disease is also prevalent in Central America. The literature dealing with the prevalence of the disease in various regions of the United States was reviewed, and some skepticism was expressed as to the bad record of southern and eastern Long Island.

Under prophylaxis were mentioned the desirability of the thorough cleansing of fruits and vegatables fresh from gardens, the discarding of bandages which have been dropped upon the floor, and special attention to slight wounds. A standard method of treating recent wounds was presented. Iodoform, silver-nitrate solutions, and tincture of iodin, were mentioned as antitetantic medicines for use in wounds. As novelties among preventive measures were offered :

1. Disinfection of excreta.
2. Free incisions of punctured or lacerated wounds.
3. The use of hydrogen dioxid as an antagonist to the tetanic virus.
4. The taking of cultures and the making of experimental inoculations from the dirt in a recent wound, to be followed by wound excision if the germs or the disease is produced.

Twelve cases heretofore unpublished were presented.

Therapeutics.—Two hundred and thirty-nine cases of tetanus were studied so as to compare the results of antispasmodic medication, and treatment by antitoxin. The former showed sixty-four per cent. of cures, and the latter sixty-three per cent. among reported cases. Yet judgment by these figures seems unfair, because the majority of cases treated by antispasmodic drugs (the fatal cases) are not reported. Amputation was

mentioned as highly recommended by Ross. The eight cases of the series treated by this method all died. Cauterization, wound-excision and neurotomy were mentioned as uncommon methods of treatment worthy of consideration. A few cures in cases treated by hypodermatic injections of weak carbolic acid and mercuric chlorid were recorded.

P.

Congenital Absence of the Penis, the Urethra Making Its Exit Into or Below the Rectum, and Emptying the Bladder by, or Exterior to, the Anus. (*Philadelphia Medical Journal, January 8, 1898.*) By Robert P. Harris, A. M., M. D., of Philadelphia

The author gives quite a dissertation on anomalies of the testicle and penis, and briefly abstracts the five cases on record of absence of the penis, and also adds the report of a new case. Harris declares that absence of the penis is so rare that, as far as can be ascertained, there is only one male infant born with this abnormity in about 30,000,000.

Harris' case was in a young man of 21, of high social standing, and he claims that it is of much greater rarity than any of the others reported, as the urethra has no communication with the rectum, and there has never been any rectal intolerance at any time. The urethra is subperineal, and makes its exit outside of the anus and at right angles to it. When the bladder is being emptied the urine is directed on a line with the perineum, backward, and across the anus. This abnormity will be much more of a puzzle to embryologists and teratologists to account for than the cases in which the urethra enters the rectum. This case may be called unique until some observer reports a duplicate of it. P.

OBSTETRICS AND GYNECOLOGY.

Pregnancy After Transplantation of the Ovaries. (*Centralblatt fur Gynakologie, June 5, 1897.*) By Dr. Woldmrar Grigorieff.

Led by the experiments of Knauer, the author performed laparotomy upon twelve rabbits, and transplanted their ovaries from the normal positions to different positions of the peritoneum covering the broad ligaments. Of the rabbits so operated upon four became pregnant subsequently. His conclusions are as follows : (1) Care in regard to the antisepsis and technique of the operation plays an important part in favorable results obtained. (2) The transplanted ovary adheres readily to the new spot, which may be chosen anywhere upon the peritoneum of the genital organs. (3) Every stage of development of the follicle may be observed in the transplanted ovaries without any deviation from the normal. (4) The individual follicles may reach maturity, burst, and under certain conditions throw out an ovum and complete the formation of the corpus luteum. (5) Pregnancy may follow the transplantation, and may go on to maturity.

L. S. Smith.

Protection of the Perineum in Delivering the After-coming Head. (*Centralb. f. Gynak., June 5, 1897.*) By Prof. Dr. Rubeska.

The method employed by the author is applicable as soon as the child's mouth has been born. The feet are grasped with one hand and raised as high as possible. The operator, stepping to one side, applies his other hand to the perineum in such a way that the extended fingers support it while the thumb, introduced into the infant's mouth and resting against the alveolar border, prevents a too rapid descent of the head. The outstretched fingers push the head forward towards the symphysis, thus relieving the pressure upon the perineum. The mouth and nose being free, there is no necessity for haste in the delivery of the head, so ample time may be allowed for stretching the perineum.

L. S. Smith.

A New Incision in Cæsarean Section. (*Centralblatt f. Gynakologie, May 27, 1897.* By Prof. Heinrich Fritsch.

This is a transverse incision across the fundus instead of the usual one parallel to the long axis of the uterus. It possesses the following advantages : The abdominal wound need not extend as far down toward the symphisis, thus lessening the dangers of subsequent hernias. The operation is much cleaner, the abdominal wound being held together beneath the uterus, which itself could be compressed and held firmly by the hand of an assistant. The hemorrhage was slight, and no blood entered the abdominal cavity. The size of the wound in the uterus decreased rapidly with the contraction of the fundus. The incision being parallel to the blood vessels, the sutures closing it are, therefore, perpendicular to them, so that the bleeding is controlled by very few sutures. The position of the wound at the fundus allows the main portion of the uterus to be dropped back into the abdomen while the wound is being sutured. Fritsch has used this method with most satisfactory results.

L. S. Smith.

Vaginal Celiotomy Considered as an Approach for the Removal of Multiple Uterine Myomata. (*Medical Record, January 8, 1898.*) By A. W. Wendel, M. D., and W. O. Bailey, M. D.

The authors call attention to the well-known fact that while multiple myomata may remain stationary in growth, they rarely do so. Also, they note the common occurrence of the atropic changes in the heart muscle, in patients suffering from large myomata in the pelvic cavity, even though hemorrhage be not a prominent symptom. They believe that electrical treatment has no effect except to alleviate the endometritis in a small percentage of cases. Cases complicated with suppurative endometritis demand hysterectomy, as do those having bilateral suppurative disease. The size of the growth which may be removed by this method depends largely upon the skill and experience of each individual operator. The utility of a preoperative examination under ether is emphasized, and it is

insisted that the consent should always be obtained to remove the uterus if it seems best for the patient.

The writers use a piece of rubber dam, with an opening equal in size to vulvar commissure, to prevent instruments and hands from contamination by discharges from rectum. The edges of dam are stitched to fourchette and thighs. The general method used by the writers is as follows : The uterus is thoroughly irrigated and curetted, but not packed, as in the event of unavoidable opening of its cavity, the gauze-pack would interfere with the suture-introduction in its subsequent closure. The posterior cul-de-sac is opened by incision in the post-cervical crescentic fold, and Douglas' pouch is then opened and explored. If the anterior space is also to be opened, the sagitto-coronal incision is employed. All bleeding points should be tied immediately. The peritoneal apertures should be close to uterus and extend well on to the broad ligaments. The bladder should be kept well out of the field of operation by vesical retractors. If there be intraligamentary development present it is well to place a provisional ligature around the uterine artery. The individual tumor, if larger than a hazelnut is morcellated; if smaller, it is twisted from its attachment and sutured with interrupted buried catgut. The uterus is often decidedly mutilated. Spaces left in parametrium are to be drained by gauze through the vagina. The wounds are dried and closed or left open, as seems best in individual cases. The after-treatment is that of celiotomy. Patients sit up on the eighteenth day. The advantages claimed by the authors for the method are the absence of scars, the avoidance of ventral hernia, and the slight amount of shock experienced.

A series of fourteen cases is reported, in which one case showed, on examination, after two years had elapsed since operation, development of a small tumor in posterior wall of the corpus. In two cases pregnancy occurred, one in a woman aged, at the time of operation, thirty years, who had been married eight years, but previously sterile. The second pregnancy was in a patient, aged twenty-nine years, who seven years before had been pregnant. The authors claim that the most distorted uterus regains a fair degree of symmetry.

NICHOLSON.

Ectopic Gestation. (*The Edinburgh Medical Journal, January, 1898.*) By Paul Swain, F. R. C. S.

The pathology of ectopic gestation is simply a loss of the cilia from the tube, allowing the ovum to adhere and giving the spermatozoa access. The primary locality in all cases is in the tube. The varieties of the tubal gestation are the interstitial, the Fallopian, and the tubo-ovarian. Of these the Fallopian is by far the most common. The interstitial is the least common, but the most serious. Sooner or later, in all cases, the tube ruptures. Those cases which go over the fourth month usually go to term either in the broad ligament or in the peritoneal cavity, when the placenta may remain in the tube or be attached to some neighboring

viscus. Rupture takes place in one of two ways, either between the layers of broad ligament, or into the abdominal cavity, that is, either intra- or extra-peritoneal. If it occurs into the peritoneal cavity, it is almost always fatal, unless there is immediate surgical aid. If between the layers of the broad ligament it may develop to full term; be absorbed as a simple hematocele after death of the ovum ; suppurate and discharge by the bladder, vagina, or rectum; or remaining quiescent terminate by mummification or lithopedion-formation ; and lastly, by a second rupture, the fetus may be extruded into the peritoneal cavity. Primary rupture usually occurs before the twelfth week. The diagnosis is by no means easy, but may be made by the well-known signs and symptoms. It is impossible to diagnose tubal pregnancy before rupture, and in some cases not even after rupture. The only treatment recommended is celiotomy, which should not be put off, to be used only as a last resort. In cases of free hemorrhage with collapse operate at once. Here intravenous saline injections may be of great service.

GIRVIN.

PEDIATRICS.

The Capacity of the Stomach in Childhood. (*Wien. klin. Woch., November 4, 1897.*) By N. Pflaunder, M. D.

Starting with the old doctrine taught by Fleischman, that the stomachs of children raised artificially have a greater capacity than those of children nourished at the breast, the author undertook to measure carefully, under identical conditions, a number of stomachs. All previous measurements he regards as more or less imperfect, because they did not take account of the internal pressure at which the stomach was filled, nor of the state of contraction or dilatation in which the stomach was found at death, and finally because the capacity was always reckoned in proportion to the age and weight of the individual, and not, as Pflaunders thinks it should be, only according to the length of the body. His own investigations have convinced him that the condition of the stomach at death is extremely variable, and he distinguishes the systolic and diastolic condition. The capacity of the stomach was measured in a large number of cases, that, in spite of his doctrine of the ratio to the length of the body, appear to have been grouped according to the age. The estimation was made, first with the pressure at zero, then with gradually 5 c.c. increments, until it reached to 30 c.c. of water. It appears from the table, that there is a marked difference between these two extremes. The capacity at birth varied from 8 to 31 c.c.; at the end of the first year from 100 to 500 c.c.; and at the end of the tenth year from 600 to 3600 c.c.; that is to say, the capacity of the stomach can be increased by means of internal pressure five-fold. The difference between systolic and diastolic stomachs is also quite marked, particularly, of course, when the lower pressures are used. At 30 c.c. the capacity is almost equal. He also meas-

ured the circumference of the distended pylorus, which he holds has considerable influence upon the condition of the stomach. The figures for this are at birth 2 cm.; at the end of 6 months, 2.7 cm.; at the end of 12 months, 3.3 cm.; at the end of 5 years, 3.6 cm.; at the end of 8 years, 4.1 cm. As a result of his observations, he draws the following conclusions. That the capacity of healthy stomachs is, on an average, considerably less than of those suffering from functional or structural disturbances. The true capacity bears reciprocal relations to the distensibility and elasticity. The larger the stomach, the less elastic and the less distensible it is. Finally, the true capacity of the stomach depends upon the size of the pylorus. If the later be narrow, the former is increased, and vice versa. For the purpose of estimating the size of the stomach during life, Pflaunder pumps air into the organ and then estimates the volume of the air in situ, by a method of which he fails to give the details. He devises, however, certain terms for the conditions that he has discovered by this method, such as hypotonia or diminution of the tonicity of the resting muscle; hypokinesis or diminution of the activity of the muscular coat. Hypotonia appears in two degrees of intensity ; in the first, the tonicity is still sufficient to maintain the normal capacity of the empty stomach ; in the second, the organ appears dilated. Distension of the stomach is much more common than has hitherto been supposed, the author finding it in fifteen per cent of his cases during the first year of life, and twenty-five per cent of the cases thereafter. In experimenting upon the stomachs of healthy children with various degrees of pressure, he found it was possible, when the pressure reached 20 c.c. of water, to cause a sudden dilatation that persisted for a considerable time. From this he concludes that in children at the breast conditions may occur, resembling dilatation, of the stomach, but only temporary in character ; but if these are repeated sufficiently often, such as might occur during lavage of the stomach, they become more or less permanent.

SAILER.

On Intussusception of the Vermiform Appendix and Cecum. (*British Medical Journal, Oct. 9, 1897.*) By Theodore A. McGraw, M. D.

The author reports the following interesting case : The patient was a boy of seven years. In June, 1896, he had an attack of cholera morbus, which lasted four days. He vomited. His bowels were moved frequently, accompanied by a great deal of pain. He strained violently during the movements. The discharges were thin and yellow, and only once or twice contained a little blood and mucus. He recovered entirely from this attack. Shortly after this he developed the following conditions : Every few days he would have an attack of " frightful abdominal pain," which would last through several hours, and had to be controlled by morphia. After an interval of apparently perfect health, the attacks would recur. He had no fever nor digestive disturbances during the attacks. His bowels were moved normally each day. Just after the attacks, they occasionally contained a little blood and mucus. There was no spe-

cial cause for the attacks. The intervals between them grew shorter and the seizures more severe. The child lost flesh and strength. After a period of four months, he came under the author's observaton. An operaton was deferred for a perod of five days. In this interval he had two attacks. The pain was so violent that the child, unless restrained, would butt his head against the wall or tear out his hair. It required threequarters of a grain of morphia to control the pain. When awaking from the sleep induced by the morphia, he would be without pain. During the attacks the abdomen was hard and tense. In the interval there was no hardness, tension nor tumefaction ; very little tenderness and no tympanites. Rectal examination was negative. The pain the child referred to the epigastric region. There was some tenderness on pressure just above the navel. The appetite was good. There was no fever until the day before the operation, when the temperature rose to 100.5° F. An omental hernia was suspected. There was a spot of apparent thickening in the epigastric region, which confirmed this suspicion. An incision was made in the median line above the umbilicus over the site of the supposed hernia, but it disclosed nothing abnormal. The transverse colon was intensely red, highly inflamed, and coated with lymph. The author pulled out the gut and found that the ascending colon had a mesocolon of such great length that he was able to draw it and the cecum through the incision with ease. The entire large bowel, as far as the beginning of the descending colon, was injected and angry looking. The trouble was found in the cecum. It was of the fetal type ; the vermiform appendix being given off from its extreme end. The cecum was long, and its end, together with the vermiform appendix, was invaginated, making a tumor within the gut which could be felt through its walls, appearing about the size of a walnut. The intussusception involved the cecum and appendix only. The ileum was not included, nor was the ileocecal orifice obstructed. There was an appreciable space between the invaginated bowel and the opening of the ileum. A radical cure was performed. The child made an uneventful recovery. The author calls attention to the great rarity of an invagination occurring at the extreme end of the bowel, rather than in its continuity, as is usual. He finds but one similar case in all the medical literature.

S. McC. Hamill.

Intusseption of the Vermiform Appendix. [*The Lancet, Nov. 20, 1897.*] By Mr. Herbert Waterhouse.

The author showed a specimen of this condition to the London Pathological Society, in November, 1897. The child had symptoms of intussusception, and an enema failing to give relief he did a celiotomy. He reduced one intussusception, and finding another in the region of the cecum, he attempted to reduce it. This was partially accomplished with difficulty. The remainder, which could not be replaced, proved to be the appendix everted. The cecum was excised and anastomosis accomplished by means of Murphy's button. The child died, and at the autopsy

the appendix was found everted into the lumen of the cecum. It formed a mass the size of a cherry, and could not be reduced. There was no concretion.

S. McC. Hamill.

A Case of Diabetes Insipidus in Childhood. [*Central. f. inn. Med. No. 40, 1897.*] By Eichenberger.

The author reports a case of a girl of 12 years. She had severe and tormenting thirst, and voided an enormous daily quantity of urine, 10 liters, equivalent to nearly one-half the body weight. The microscopic and chemical examinations of the urine were entirely negative. Sp. Gr. was unusually low. She had no furuncles. The skin was very dry and brittle, and never showed any secretion of sweat. The trouble succeeded an attack of influenza. Under small doses of salicylate of soda, the disturbing thirst grew less and the daily quantity of urine was reduced from 10 to 4.5 and 5.5 liters.

S. McC. Hamill.

A Case of Fatal Infantile Anemia with Greatly Enlarged Spleen. [*Medical News, Dec. 4, 1897.*] By Herman F. Vickery, M. D.

Vickery reports the case of a child, aged 18 months. There was no venereal history. The father had had severe malaria. The child had been fed partly on breast milk, partly on undiluted cow's milk. At eight months it began to grow pale and weak, and the abdomen became swollen and hard. There was persistent diarrhea. The child was feeble and seemed to suffer; the anterior fontanel was open; there was a slight rosary, and the epiphyses were somewhat enlarged. There were hard pea-sized glands in the neck, axillae and groins; the liver was moderately increased in size; the spleen extended slightly beyond the umbilicus to the right and downward to within two fingers' breadth of the anterior superior spine of the left ilium. The blood examination showed 2,500,000 red cells, 22,000 white cells, 32 per cent. of hemoglobin. The number of white cells counted was one thousand; small lymphocytes, 48 per cent.; large lymphocytes and transitional cells, 8.9 per cent.; polymorphonuclear neutrophiles, 29.4 per cent.; eosinophiles, 4.8 per cent.; myelocytes, 8.2 per cent.; normoblasts, 57; megaloblasts, 92; microblasts, 48; cells with karyokinesis, 6. There was a fair number of poikilocytes, a few macrocytes. The author suggests that the condition is an intermediate one between leukemia and pernicious anemia.

S. McC. Hamill.

The Quality of the Milk Supplied to the Metropolitan Hospitals. (*The Lancet, Jan. 1, 1898.*

A report of a special analytical commission on samples secured from milk supplied to eleven of the principal hospitals of London, showed a result which was summed up as follows: "Seven were of good average quality, two of indifferent quality, and two as decidedly poor, and in all

probability diluted." These conclusions were based upon the standard adopted by the Society of Public Analysts, making the limit of fat 3.0 per cent. and of non-fatty solids 8.5 per cent. Three of the specimens contained distinct quantities of boric acid, and it is remarked that if the samples had been taken in the summer probably a greater number would have contained preservatives and in larger quantities. The report is concluded with the following remarks: "Everyone must admit the necessity of a pure and unadulterated supply of milk to the sick and debilitated. That such a supply is not universal is evident to us in the present inquiry as well as from the testimony of hospital physicians who have been in communication with us upon the subject. There is, we fear, some tendency on the part of administrative authorities to decide upon buying milk for hospitals at the lowest possible price, and milk of the lowest possible quality is accordingly supplied. A fair price should be paid, and a pure, unimpoverished article of excellent quality then may be justly demanded."

The importance of having supplied to our hospitals pure milk, and that containing the proper percentage of fats and other solids, should receive the careful consideration of those having charge of such institutions, and we suspect that an investigation and analysis of the milk supplied to the large hospitals in this country would elicit some startling facts in this respect, and show at least as bad a state of affairs as given in the above report.

KINNE.

NEUROLOGY.

Failures of Cerebral Surgery Depending on Incorrect Diagnosis. (*Berliner klin., Wochenschrift, Nos. 49 and 50.*) By Prof. H. Oppenheim, of Berlin.

Oppenheim calls attention to the fact that meningitis serosa may present the signs of cerebral tumor, and that almost all chronic cases of the former have been diagnosticated as cases of the latter disease. Recent observations have shown that hemiplegia and aphasia, though usually only transitory or of very abrupt development, may occur in meningitis serosa. Cerebellar ataxia has also been noted in this disease, and the diagnosis between meningitis serosa and cerebellar tumor may at times be impossible. Lumbar puncture has not proven of as great diagnostic value as was expected. The symptoms of tumor may disappear for some time after the removal of some of the cerebro-spinal fluid, and thus cause error of diagnosis. Cases of brain-tumor, and especially of cerebellar growth, are reported, in which Quincke's method (lumbar puncture) has caused death. Even Quincke has acknowledged that there is an increase of cerebrospinal fluid and of pressure in temporary conditions, such as hemicrania or other forms of periodic headache. If the acute form of meningitis serosa is really as common as the numerous publications indicate, it must be regarded as comparatively harmless, or else we should be able to observe it much more frequently at the necropsy. Lumbar puncture is not as dangerous in cerebral ab-

scess as was at first feared, and usually permits of the diagnosis of purulent meningitis when the condition exists. Oppenheim speaks of the difficulty of diagnosticating between cerebral abscess and brain tumor when otitis purulenta is present, and reports a case in which he was able to make a correct diagnosis of tumor on account of the normal condition of the pulse and temperature, and the absence of the pathologic changes in the dura at the time of trephining. The aphasic symptoms, which were observed in this case usually only when the patient was sitting up, were due to the location of the tumor in the left lower parietal region and supramarginal gyrus. In the upright position the tumor pressed upon the temporal lobe.

In making a diagnosis between cerebral tumor and poliencephalitis the writer states that we must remember that in some cases of tumor the symptoms may disappear, and that in poliencephalitis, somnolence and optic neuritis are not uncommon. In most cases it is impossible to diagnosticate between aneurism of a cerebral artery and any other tumor, and when the former exists lumbar puncture is dangerous. So-called cortical epilepsy and monoplegia are not absolutely safe signs for localization, inasmuch as they occur in tumors of the central ganglia, of the cerebellum, and of the frontal lobe. Tumors of the central ganglia, especially when they grow toward the cortex, may cause Jacksonian epilepsy and monoplegia, but these are neither early nor prominent symptoms. They may also cause monoplegia by compression of the internal capsule (Zeller's case), but it is a monoparesis rather than monoparalysis, and motor symptoms of irritation are absent. Tumor of the frontal lobe produces the motor symptoms by pressure on the central gyri.

SPILLER.

The Condition of the Cells of the Spinal Ganglia in Tabes as Shown by the Nissl Stain. (*Neurologisches Centralblatt, 1898, No. 1.*) By Karl Schaffer, M. D.

Schaffer has examined the spinal ganglia by the method of Nissl in three cases of tabes, one of which was in an early stage of the disease. He finds that the cells of the normal spinal ganglion are in contact with their capsule, as Lenhossék has stated, and that in some cells the tigroid is concentrically arranged. He was unable to find important changes by Nissl's method in the tabetic spinal ganglia examined by him, but on the contrary, he even found the cells normal when the posterior roots were intensely degenerated. He concludes, therefore, that the initial lesion of tabes cannot be within the spinal ganglia, but must be within the posterior roots.

SPILLER.

Alcoholism: Consecutive Left Hemiplegia and Epilepsy, Atrophic Sclerosis, Pachymeningitis and Meningo-Encephalitis. (*Le Progres Medcial, Sept. 18, 1897.*) By Bourneville and Rellay.

The patient was a boy of 11 years, of good family history. The child was born after a natural labor, and was normal at birth. He was breast-

fed exclusively for several months, and then was given additionally a mixture of cow's and goat's milk. The first dentition was normal. The child was weaned at the fourteenth month, walked at the fifteenth, and talked at the eighteenth. The first nervous symptoms appeared when he was four years old. He was much advanced for his age. There was no previous history of headache nor injury. One evening he suddenly began vomiting. Following this he fell asleep. The next morning his father found him unconscious and cold, with his head toward the foot of the bed. He had persistent convulsions, more marked on the left side, for three days without return of consciousness. The mouth was drawn to the left, and the whole left side was paralyzed. The forearm was flexed and the thumb in the palm of the hand. The child was bed-fast for fourteen days. The convulsions recurred with decreasing frequency. The condition was attributed to alcoholism, as the child was in the habit of drinking the dregs of the glasses of the people who drank at his grandfather's inn. On the day that he was taken ill, he drank more than usual, and was "dead drunk."

Seventeen days from the beginning of his trouble, his intelligence was diminished. He was irritable, and he could answer but not ask questions. The paralysis of the left side gradually lessened. At the end of 15 months, the left leg was much better and the left arm a little improved. The epileptic seizures continued. He usually had three or four on the same day. There was an interval of a week or so between the attacks. Eight was the highest number in 24 hours. At the age of 9 years, the attacks became more frequent, occurring almost every day. From the beginning of the illness, he had vertigo and twitching in the left side. There was involuntary micturition during his fits and in the attacks of vertigo. He became coarse and somewhat violent, and had eventually to be restrained. His speech grew difficult, and he sometimes stuttered.

Physical Examination on Admission.—The intelligence was much below normal. The cranium was brachycephalic. The right parietal eminence was more striking than the left. The left side of the face was smaller than the right. There were no troubles of sense or sight. The left arm and leg were completely paralyzed. There were contractures in the arm, but not in the leg. The knee-jerk was abolished, and there was some arrest of development on this side. The stools were voluntary. There was nocturnal enuresis. Sleep was quiet. There was no twitching of the face, no cephalalgia. There was no vaso-motor trouble, no dribbling. The child was affectionate and gentle. He could neither read, write nor count. The general sensibility was well preserved. His speech was nasal and very slow. The pubes were free of hair. The few months preceding death he emaciated rapidly. Following his attacks, he would sleep for many hours. His locomotion was slow. He voided urine involuntarily, and his memory failed rapidly. A few days before death he became very weak, and developed high fever and rales at the base of the left lung. He grew rapidly worse and died.

Autopsy 30 hours after death—Head.—The bones were hard and from 5 to 8 mm. in thickness. The cristagalli was triangular, with its edges thick. The pituitary body was very small. The sutures persisted on both surfaces, and were much indented on the external. The frontal bone receded, and there was a pronouncd depression corresponding to the anterior and superior angle of the parietals. There was a depression on the parietal bone behind the internal third of each of the occipito-parietal sutures.

The dura mater was thickened and extensively adherent to the cranium. The pia mater, over almost the entire two hemispheres, was so thickened as to have the appearance of a normal dura mater. It was whitish in color, except at two points, over the right temporal and occipital lobes, and over the left parietal region, where there were some eechymotic areas. It was glossy on the external surface, and reddish in many areas internally. The two frontal lobes were agglutinated in their posterior portion. So also were the lobes bordering on the fissure of Sylvius. The mammillary body and the cerebral peduncle were smaller on the right side than on the left. The right anterior pyramid was smaller than the left. The olivary bodies were equal.

Right Hemisphere.—It was smaller than the left in all measurements, and weighed 262 grams less than the left. On section, the atrophy was seen to be chiefly cortical. The fissure of Sylvius was very large, the Island of Reil being visible. The fissure of Rolando was less marked. The convolutions of the Rolandic zone were the most atrophied of all. There were foci of lobular atrophic sclerosis and lesions of meningo-encephalitis scattered irregularly over the entire right hemisphere. The sclerosis showed especially over the parietocentral lobe, the frontal, the ascending frontal and ascending parietal. The meningo-encephalitis attacked the superior parietal, the ascending parietal and the bitemporal. The lateral ventricle was not dilated. The central masses were smaller than the left.

Left Hemisphere.—It was well developed. The convolutions were well shaped and large. On section, the gray and white substances were normal. The lesions of encephalitis were almost general, but more superficial, and less destructive to the gray substance than on the right side. These lesions were especially evident in the Rolandic zone and over the inferior parietal. The fissure of Sylvius was deep. The Island of Reil showed slightly. The lateral ventricle was normal.

Thorax.—The left pleural cavity contained a considerable quantity of a thick, fetid liquid. The base of the left lung was the seat of an extensive cavity. Its contents and walls imparted a very gangrenous odor. The base of the right lung was congested. The pleura was free. All other organs were normal.

S. McC. Hamill.

PATHOLOGY.

A Study of the Etiology and Histology of Pneumonia in Children, and of Pneumonia in General. (*Deutche Archiv., f. klin. Med, 1897, LVIII, P. 368.*) By Durck.

By the study of pathologic and bacteriologic investigation of a large number of lungs from children who died of pneumonia, both in cases of primary and secondary origin, the following bacteria were found: diploccocus pneumonia, streptococcus, staphylococcus bacteria pneumonia, bacteria coli, etc. The diploccocus pneumonia was found to be most numerous. Of the remaining mixed germs, the germ of the primary disease was not necessarily the most prevalent, with the exception of diphtheria, in which the bacillus diphtheria was always found in large numbers. The other forms of bacteria seem to have little to do with the diseased condition, and especially marked was the diplococcus lanceolatus which was rarely found in the fibrin, and usually found in large numbers outside the diseased area. In children who had had pneumonia in consequence of some other disease the same bacteria were found as in the primary pneumonia. The prevalence of the diplococcus lanceolatus was observed in large numbers as before.

There being very little chance to study fresh lungs of human beings, this study was made upon domestic animals, immediately after they were killed. In these lungs all sorts of germs were found, and also some of a pathologic character, as the bacillus pneumonia, the diplococcus pneumonia, staphylococcus, and streptococcus; upon this can be based the idea that germs can be found in healthy lungs, and under normal conditions these germs are harmless; but at the moment of injury they become active. With this in view, several experiments upon animals were tried. Through a tracheal tube germs of different sorts were blown into the lungs, without producing pneumonia; but if some dust was introduced, with or without germs (as they are present in the lungs under normal condition), so that this dust would irritate the delicate membrane of the lung, pneumonia always followed. The effect of cold was studied, by first keeping an animal in a warm room, about 37° C., then immersing it in an ice-cold bath, and allowing it to stay there for from two to seven minutes; pneumonia usually followed, and this pneumonia presented all the histologic changes that are seen in lobar pneumonia in human beings. The experiments prove that there is usually some violence to the lung-tissue first, which in the above experiments was due to the dust or to the cold, and then the disease germs acting upon this already inflammed tissue cause the lungs to lose their normal resisting power, and become a field for the multiplication of the germs already there.

NEWCOMET.

The Leucocytes as Destroyers of Bacteria. (*Editorial in New York Medical Journal, Jan. 15, 1898.*

Dr. A. Shattenfroh, in the "Archiv für Hygiene," Vol. XXXI., Part I., says that Buchner's investigations demonstrated absolutely that the blood-serum was bactericidal in its nature. Buchner, Hahn, and Denys

assumed this principle to reside in the alexins which secreted albuminoid bodies. These alexins were supposed to be derived from the multinuclear leucocytes which constitute the mother-substance of the alexins. The theory was thus directly opposed to that of Metchnikoff, who denied that the blood-plasma, fluids, and tissues had any bactericidal action. Metchnikoff held that instead of this bactericidal agent being the prime factor in the defense of the economy that the multinuclear leucocytes took the bacteria into their interior, and digested them after they had been killed by some substances that acted chemically. The tendency at present is to affirm that this action of phagocytosis is the exception rather than the rule. The experiments of Buchner, Hahn, and Denys prove that these bactericidal agents are set free in the circulation when they are separated from the living leucocytes. Shattenfroh proves: (1) That the leucocytes of the rabbit and guinea-pig at least contain bactericidal materials which are set free when these cells perish. (2) That a temperature of 176° to 180° destroys this agent. (3) That by freezing the isolated leucocytes, macerating in the cold, then in a physiologic salt solution at 140°, bactericidal extracts are obtained. (4) The bactericidal action of the blood and that of the fluids of the leucocytes are in some degree different in their nature, but that the alexins and the bacteria-destroying principles of the leucocytes may be identical.

WOLDERT.

Experimental Study with the Various Methods of Defense of the Buccal Cavity against the Invasion of Pathogenic Bacteria. (*Thesy de Paris, 1896, F. Steinheil,*) By Arthur Huggenschmidt.

After a long series of exeriments the author reaches the following conclusions: If the experiments which have been made have not demonstrated the bactericidal properties of the saliva, and if one may even doubt its role in the attenuation of the virulence of the pathogenic microbes which are common inhabitants of the buccopharyngeal cavity, it is not so regarding the positive chemotactic properties of this same saliva unfiltered, such as is found in the buccal cavity. By these same properties, and especially by the intermediation of the soluble products of the microbes which vegetate there, the saliva possesses positive chemotactic properties which explain the immediate diapedesis occurring in the normal mouth for the destruction of the bacteria. This diapedesis is intense, especially on the surface of the wounds bathed by the saliva in pathologic cases. This chemotactic property is not the only cause to explain the diminished virulence of the germs of the mouth, and the slight danger of infection to which the wounds of the buccal mucous membrane expose us. The intervention of the buccal mucous when there is a suspension of the salivary secretion, the incessant epithelial desquamation and the vital concurrence which eliminate the non-acclimated bacteria ought, on their part, to enter into account.

S. McC. HAMILL.

PRACTICAL NOTES.

The Treatment of Fractures by Massage.

An important discussion has taken place upon this subject at the last two meetings of the Academy of Medicine upon December 21st and 29th. M. Lucas-Championnière, the pioneer in France of this method, showed a patient in whom a fracture of the lower end of the humerus had been united. There had been a great deal of movement between the bones and it had been found impossible to immobilize the fragments. Massage and immediate movement were found sufficient to restore the power of useful motion and to bring about rapid consolidation of the fracture in a good position. M. Lucas-Championnière took advantage of the occasion to remind his audience that he had employed this method for thirteen years and always with great success, and never during this time had he employed a plaster bandage or any other kind of immobilizing apparatus. In fifty cases of fracture of the clavicle he had obtained by massage far superior results to those given by the most perfect form of immobilizing apparatus. In the case of fracture of the humerus which he showed the fracture was one of the worst kind at a place just above the elbow-joint and comminuted. The man suffered great pain and the least movement dislocated the elbow-joint. During the first four days the elbow was placed in a moulded splint, from the fifth to the eighteenth day the arm was supported by an ordinary sling and after that had no support at all. The mere weight of the limb sufficed to keep the fragments in a good position. From the first day the patient was massaged the acute pains rapidly disappeared. As soon as the limb appeared to be so firmly united that no chance of future displacement was likely the patient left the hospital—on the twenty-eighth day—but continued to attend as an out-patient. In place of six weeks, which was the time ordinarily given as necessary for a fractured humerus to unite, the bone in the present case was quite firm in less than three weeks and in addition the treatment used was almost painless. During the last two years M. Lucas-Championnière had treated more than twenty cases of similar fractures of the humerus and always with the same result. He had also treated many fractures of the radius, of the scapula, and of the leg. Immobility did not favor repair of the tissues; movement was necessary for repair, for movement was a necessity of life. M. Lucas-Championnière concluded by affirming that immobility as a therapeutic method should be made to disappear from surgery. M. Marc Sée, in answer, said that in his opinion the only effect of massage would be to make the callus thrown out round the fracture disappear and prevent consolidation. He himself had employed for many years compression by an india-rubber bandage—a treatment which had given him very good results and was very simple. M. Péan had recently confirmed the excellence of the re-

sults obtained by M. Lucas-Championnière's method. It was especially useful when there was not great displacement of the fragments. If the displacement was too considerable the lack of any immobilizing apparatus brought about, in his opinion, union in a bad position which necessitated an operation later. M. Labbé considered that massage was excellent in articular and peri-articular fractures, but that there were other kinds of fractures in which the immobilizing treatment should still be used. Such were fractures in the middle of a long bone and especially fractures of the lower third of the leg. To treat such in any other way would be to expose the patient to the risk of a false joint forming, a result which has become only too frequent of late years and which M. Labbé attributes to the too general use of the method of M. Lucas-Championnière. The latter surgeon in closing the discussion maintained that immobility appeared to him to bring about a condition of lowered vitality in a limb, while what was desired was an active process of repair. He would move the osseous fragments every time that there was no muscular spasm to pull them out of place, but he agreed with M. Labbé that in a certain number of fractures—notably those of the lower third of the leg—the old fixation treatment ought to be maintained. He had worked out statistics comparing accidents occurring in fractures treated by immobilization and by movement and found that they were very much more common in the first class than in the second.—" Lancet."

The Indications and Contraindications for Bicycle Riding in Women.

Fauquez's conclusions in the " Journal des connaissances médicales " for August 26th may be summed up as follows (" Gynécologie," December 15th): Bicycle-riding may be recommended in cases in which there is absolute integrity of the genital organs, for anemic and chloro-anemic persons, for dyspeptics, for neurasthenics, for sterile and obese persons for young girls in whom menstruation is not normally established, and for women who have suffered from troubles dependent upon the menopause.

In cases of diseases of the uterus or the ovary this exercise may be advised as follows: 1. In uterine congestion. 2. In amenorrhea or suppression of menstruation connected with an arrest of development of the ovaries and of the uterus, with anemia, chloro-anemia, digestive troubles, neurasthenia, and chronic affections; with troubles resulting from physical or mental shock, cold, etc. 3. In dysmenorrhea connected with nervous troubles. 4. In congestive dysmenorrhea due to any cause capable of provoking congestion in the uterus and the ovary, such as physical or mental shock. 5. In deviation of the menses or supplementary menstruation. 6. In fibrous tumors when the hemorrhagic stage has passed.

Bicycle-riding may be permitted in cases of mechanical dysmenorrhea due to an obstruction to the discharge of blood, either congenital or acquired, and in membraneous dysmenorrhea; in cases in which the uterus becomes displaced; in cases of chronic metritis connected with the arrest

of involution of the uterus after confinement or abortion, if it is not painful and recovery has begun. In this case, however, the exercise must be taken in moderation; in cases of leucorrhea in anemic and chloro-anemic persons, and in cases in which the general condition is weak.

Bicycle-riding must be absolutely proscribed as follows: 1. In amenorrhea connected with pulmonary phthisis, cancerous affections, diabetes, organic diseases of the heart, and diseases of the kidneys, such as albuminuria. 2. In cases of metrorrhagia or excessive menstruation. 3. In cases of inflammation of the uterus and its annexa, acute metritis, chronic painful metritis, hemorrhagic endometritis, purulent endometritis, leucorrhea connected with an inflammatory condition of the intra-uterine mucous mebrane, inflammation of the adnexa, salpingitis, oophoritis, salpingo-oophoritis, perimetritis, pelvic cellulitis, and pelvic abscesses. 4. In cases of pelvic hematocele and of fibrous tumors during the hemorrhagic stage. 5. In cases of inflammation of the vulva or vagina before complete recovery.—"New York Medical Journal."

Bleeding.

Dr. Albert Robin, the savant professeur at the Hospital de la Pitié, has just given us the practical results of his studies in bleeding, which throws a new light upon a time-honored therapeutic procedure. The conclusions he reaches are these: "Besides the depletive action of bleeding already known, there is another not sufficiently put in relief, namely, that which favors oxidation, thanks to the superactivity that it gives to nutrition." Venesections are therefore a powerful agent to employ against diseases accompanied by decline of the nutrition or slackening of the oxidations, and not as a means in a given disease or a particular morbid entity. Bleeding has consequently, in Dr. Robin's opinion, a double action—mechanical and chemical. The diseases in which he has recently bled were cerebral hemorrhage with ventricular inundation, acute nephritis with uremic respiration, saturnine Bright's disease with epileptiform crises and enormous dyspnea, cardiac asystolia with cyanosis, uremic coma with left hemiplegia, uremic dyspnea with hydrothorax, asystolic aortic insufficiency and pulmonary congestion, arterio-sclerosis with mitral lesion; as well as others with edema, anasarca, and dyspnea. The quantity of blood taken varied from one hundred and fifty to two hundred and fifty and three hundred grams—in some instances with rapid relief. Of fourteen cases treated by bleeding, ten gave good results, and in four the treatment was not successful. These clinical examples confirm what has been ascertained by experimentation. It is true, however, that bleeding has been abused; but it should not on that account be made to disappear from therapeutics altogether.

Phlebotomy is advocated by Lépine and Bouchard in uremic intoxication. They attribute that complication to the potassium salts contained in the blood. It is not so much the quantity of poassium salts taken away by bleeding, as the oxidation that follows, that is efficacious. —"Medical Record."

Dangers of the Nasal Douche.

Lichwitz ("Sem. med.," November 26, 1897) deprecates the routine prescription of the nasal douche in all cases of hypersecretion of the nasal mucous membrane. Irrigation is called for only when the nasal fossæ require clearing of pus and crusts, for instance, in idiopathic ozena. This affection is mainly limited to the nasal fossæ properly so called, and irrigation is in such a case the most fitting form of procedure. An ordinary syringe or enema syringe with suitable nozzle should be used. In all other nasal affections irrigation is inadequate or useless; it is even dangerous. Reported flooding of the mucous membrane may give rise to olfactory lesions. Antiseptics are highly injurious, and pure water is badly borne; the physiological solutions of sodium chlorid, sod. bicarb. or sod. sulph. are the only harmless liquids. In numerous cases irrigation has caused the sense of smell to be temporarily or permanently diminished or lost. Distressing frontal or occipital headache may result, owing to the liquid passing into the sinuses. The injection of irrigating liquids may even set up inflammation of these cavities. The most skilful and careful irrigation is insufficient in many cases to prevent the resulting headache. A very grave complication is the penetration of the liquid into the middle ear, suppurating otitis media occasionally supervening. In acute coryza, especially in children, douching should never be practised. In one such case known to the author mastoiditis followed irrigation of the nasal cavities.—"British Medical Journal."

Strapping the Chest in Pneumonia.

Solberg is reported in the "Deutsche med. Zeitung" of August 5, 1897, as using, in a case of pneumonia with severe pain in the side, in which he could not resort to the injection of morphin, a strip of adhesive plaster, and the result was surprisingly prompt, as in cases of a fracture of a rib. He has since employed the plaster in six other cases of severe pain in the side occurring in the course of pneumonia. In four of them, in which the inflammation was in the lower lobe, the improvement was notable. In another case, in which the "stitch" was really in the scapular region, alleviation was effected by applying the strip of plaster directly beneath the axilla. In the sixth case, in which the "stitch" was not severe, and the strip was removed at the end of a day, because the patient felt a little constrained by it, it was again applied at the patient's request. Even the dyspnea and the cough seemed to be mitigated, according to Solberg's observation, and the patient's own statements. The strip used was of American adhesive plaster, not more than an inch and a half wide, applied as in cases of fractured ribs.—"Medicine."

Treatment of Spasmodic Wry Neck.

At a meeting of the British Orthopedic Society, held in London, on Friday, November 5, Mr. Noble Smith read a paper upon this subject. Out of eighteen cases which he had treated he had operated upon eleven by excision of a piece of the spinal accessory nerve, and in eight of these cases he had also had to operate upon the cervical nerves. In all the eight patients he had removed portions of the second, third and fourth ex-

ternal branches of the posterior cervical nerves. In the three cases in which he had not performed this latter operation, two of the patients were for the present sufficiently contented with the results obtained by division of the spinal accessory alone. In the third case, although the sterno-mastoid was absolutely paralyzed by the first operation, the patient said she did not realize any benefit, and could not be persuaded to submit to a completion of the treatment by operation on the posterior cervical nerves, but it was stated that this patient had firmly made up her mind before anything was done that no treatment would relieve her. Mr. Noble Smith contended that, considering the almost uniform success of the double operation, this treatment could now be considered as a well established and trustworthy method.—"Medical Press and Circular."

On Toothache Remedies.

Dr. Frederick C. Coley, in an article on the medical treatment of toothache, in a recent issue of the "Practitioner," states that of all medical remedies for toothache he knows of none which is so successful as salicylate of sodium. He believes it is especially useful in those cases where the pain is started by "taking cold." Even in the condition which is called by dentists "periostitis," where the carious tooth becomes slightly loosened and projects beyond its neighbors, and is exquisitely tender when eating is attempted, he has often known sodium salicylate to be completely and permanently successful. "A dose of gr. xv. will usually relieve the pain very promptly, and if this is repeated every four hours the inflammation may entirely subside, leaving, of course, a carious tooth to be disposed of according to circumstances. The addition of belladonna is often advantageous. Fifteen grains of sodium salicylate, with 15 minims of tr. belladon., will often procure refreshing sleep instead of a night of agony." Dr. Coley believes that this use of salicylate of sodium is not generally known. He first became aware of it by experience on his own person, and since then he has used it with many brilliant successes and few failures in a very large number of patients. He has once, however, known phenacetin to succeed where salicylate failed, but he finds the salicylate is much more worthy of confidence as a rule. It is especially valuable with children, where extraction of teeth is to be avoided, if possible, lest the development of the maxilla should be injured.

The Nursing of Children Having Diptheria.

Thomas ("Der Kinderarzt," 1897, VIII., 10). The author does not believe that the treatment with antitoxin injection alone is sufficient, but recommends as well the carrying out of all rules of general therapeutics in vogue before antitoxin treatment was employed. It is necessary in the first place to administer a roborant diet. The cleansing of the mouth and nose with a 1 to 2 per cent. solution of salicylic acid is to be recommended, it being of great value for the removal of secretion and pseudomembranes. A bath of lukewarm water also should be administered, for the preservation of the function of the skin is of great importance. The diet of a child suffering with diphtheria is at all times an important prob-

lem, as it frequently happens that children will not eat or drink for days together, and occasionally a case is met with which dies for want of food, although the disease has been cured.

Finally, as the after effects of serum therapy frequently cause some anxiety, it devolves on us especially to feed the children mainly with milk during the first few days, on account of the danger of the occurrence of nephritis. As most children who are fed on milk in scarlatina escape an attack of nephritis, this measure should be brought into use in diphtheria. It insures the normal action of the kidneys, and represents at the same time an adequate nourishment. Metabolism is accelerated by treatment with serum. Dr. Valette has shown that the urates and phosphoric acid are greatly increased. It stands to reason, however, that we should endeavor to diminish as much as possible the work of the kidneys.—"Pediatrics."

Urticaria.

Wolff says that he is thoroughly convinced of the value of phosphate of soda in the treatment of this common complaint

In acute cases in adults his plan is to give dram doses of a supersaturated solution of phosphate of soda, i.e., sixty to eighty grains to the dram, the salt being dissolved in its own water of crystallization. This is to be repeated every three hours, and in addition the following antipruritic lotion is recommended:

Pulvis Calamin		
Zinc. Oxid	aa ʒ iss	6
Acid. Carbolic	ʒ ss	2
Aq. Calcis	℥ ij	64
Aq. Rosæ	ad ℥ iv	128

This is to be applied frequently and freely. The dose of the salt may be appropriately reduced in the case of children, and the quantity of carbolic acid in the lotion diminished. The effect is prompt, within a few hours the acute symptoms subside, and in from twelve to twenty-four hours the eruption ceases to appear.

In the chronic type of disease the relief afforded is equally prompt, but recurrences are apt to follow. The remedy should be given in doses of one dram or more after meals, and should be persisted in until all tendency to recurrence of the attacks has disappeared. Patients do not acquire a tolerance for the drug, and, therefore, it may be administered in unchanging doses for as long as is necessary without any injurious effect.

The remedy is especially applicable in urticaria of gastro-intestinal origin, and is consequently applicable to fully 90 per cent. of all cases.

Sodium phosphate is regarded as one of the most reliable hepatic stimulants and intestinal antiseptics, and its curative influence over urticaria is probably based upon this physiologic action.—"Journal of the American Medical Association."

The Use of the Phonendoscope in Surgery.

Van Arsdale ("New York Polyclinic," August 15th, 1897) praises the use of the phonendoscope in surgical diagnosis. In the case of a broken bone, over which a scratching noise is made, the instrument will detect the difference of such a noise from one made over a bone which is uninjured; as, when a fracture is present, the break in the bone obstructs the passage of sound, and again, the presence of soft tissue between the ends of a broken bone may be detected in the same manner. He has found this instrument to be of great value in the study of aneurism, in the diagnosis of the extent of tumors the density of which is different from that of surrounding tissues, in the detection of the presence of small quantities of fluids in the joints, and especially in the diagnosis of abdominal tumors. He employs a phonendoscope which is fitted with a pin so that the sound is received upon a very small point. The ease with which the colon and intestines may be located and traced appears to be one of the great advantages of the use of this instrument. By means of different notes transmitted through it the author was enabled to locate a growth of the colon which could not be detected by the ordinary methods.—"Medical News."

The Chief Indications for Paracentesis of the Drum Membrane.

The chief indications for paracentesis of the drum membrane, as practiced by Dr. Randall's ear clinic, are as follows:

1. When there is great pain associated with a bulging membrane due to retained purulent secretion and the proper drainage canal through the Eustachian tubes to the nares is impervious to gentle Politerization.

2. When the tension of the drum membrane is high, but the bulging is slight, because the membrane has been thickened by a chronic otitis media.

3. When there is not sufficient drainage for the pus and there is dan- of the extension of the inflammation to the antrum and mastoid.

4. When the pain is excessive and unrelieved by the hot douche, and the tension of the membrane is high, paracentesis may be performed simply for relief of the pain.—"Philadelphia Polyclinic."

Acute Cystitis.

A very frequent cause of acute cystitis is the decomposition of residual urine. This may quite readily be cured without washing the bladder and without internal medication, simply by drawing off every drop of urine by the catheter every three hours. The catheterization must be done punctually every three hours, day and night, whether the patient urinates or not. Five minims of the oil of winter-green twice daily, and the ingestion of a gallon of water every twenty-four hours, will contribute to the cure and will greatly hasten it.—"International Journal of Surgery."

Hyperclorhydria.— When the gastric juice contains an excess of hydrochloric acid Boas indorses the action of the following mixture, recommended by Wolff :

Sodium sulphate, ℥j.
Potassium sulphate, ℥i¼.
Sodium chlorate, ℥j.
Sodium carbonate, ℥vj.
Sodium borate, ℥iiss.

M. Sig.: Half a teaspoonful in a half glassful of water three times a day.

Pulmonary Emphysema.—

Sodium arsenate, 1 grain.
Potassium iodid.
Powdered rhubarb, of each 32 grains.
Extract of dulcamara, q. s.

M. Divide into thirty-two pills. One to be taken daily for the first few days, then two a day.—*Indian Lancet.*

Prostatitis.—

Ichthyol . . . . . from 5 to 12 grains
Cacao butter . . . . . " 30 " 40 "
Extract of belladonna . . . . . ¼ of a grain

M. S.: Two or three such suppositories to be used daily.—*Centralblatt für klinische Medicin.*

Uremia.—

Ext, pilocarpi alc.
Ext. scillæ.
Resin. jalapæ.
Resin. scammonii, of each, gr. xv.

M. et ft. pil. No. xx.

Sig.: Four or five pills daily during as many days.—*Medical News.*

Gastric Indigestion.—This, when accompanied by what is termed torpidity of the liver, will be readily amendable to :

Acid nitro-muriatic, diluted, 4 drachms.
Tincture of nux vomica, 2 drachms.
Fowler's solution, 72 drachms.
Essence of pepsin, sufficient to make 6 ounces.

Dessert-spoonful three times daily after meals.—*Practitioner.*

INTERNATIONAL MEDICAL MAGAZINE

An Illustrated Monthly of Medical and Surgical Science.

Edited by
WALTER L. PYLE, A. M., M. D.

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The Limits of Municipal Medicine.

THE LAST five years has witnessed a remarkable change in the administration of cities, and especially in the conduct of the Boards of Health. Although we are far short of the millenium, city officials are no longer the almost avowed spoilsmen that they formerly were, and an intelligent popular opinion has been awakened in the direction of municipal economy, and a modified socialism for the best interests of the greatest number. It is a matter of surprise to many physicians who have occasion to refer to statistics of disease in the past, that even the recording department of their city was so inadequately conducted a few years ago that nothing like an accurate comparison of present and past death-rates or of the relative prevalence of diseases is possible. There are a few cities of which this is not true, but the official report of the latest United States census confirms the statement that we are just at the beginning of reliable statistics. Beyond the registration of deaths, births, contagious diseases, and marriages, it is rather difficult to define the functions of Boards of Health in the past, except as some terrible epidemic aroused a popular support of violent quarantine measures, or of elaborate, expensive, and frequently useless, means of disinfection. This is by no means equivalent to saying that former health-officials were incompetent or dishonest. It simply means that the Health-Department

was not sufficiently supported with money and men, and that it did not have the influence to enforce needed reforms. For example, within three years, the water commissioners of a city of considerable size have flatly refused to close a source of supply known to be a cause of typhoid fever, and it required a hard fight on the part of the city bacteriologist and his superiors in the Health-Department to win the safety of the citizens. If this is the case at a time when the bacterial cause of typhoid fever is well recognized and capable of actual demonstration, imagine the futility of such an attempt by a Health-Department of a few years ago, when bacteriology as a practical science scarcely existed, when the possibility of demonstrating the typhoid bacillus was doubtful, and when a large minority of the medical fraternity still scoffed at germs and held to miasmatic tendencies and atmospheric conditions as causes of infectious diseases.

The idea that a Health-Department should have actual authority as regards water-supply, disposal of sewage and garbage, and cleaning of streets and conveyances, is a novel one, and has been contested by engineers and superintendents of city departments until carried to the court of ultimate appeal—popular opinion, which always takes its own time in sifting evidence.

Most large cities, in addition to a quite general, though very recent, recognition of the advisory power of the Board of Health in regard to other departments, have now the following medical equipment: Registration; bacteriology in regard to tuberculosis, typhoid, and diphtheria; water-examination; chemistry, in regard to all problems connected with water and milk supply and the general oversight of drugs, provisions, etc.; vaccination for all school children and others who wish free service; pathologic examination of all coroner's cases; medical and surgical attendance for firemen, policemen, occasionally for other municipal employes; medical and surgical attendance for indigent persons of any description, at their or at the physician's office, and we may add the voluntary care of the sick and injured in hospitals and dispensaries, the former usually, the latter rarely, receiving direct municipal support to supplement the major item of private charity.

Every governmental undertaking must be considered from two aspects—the economic benefit of the public, and the commercial detriment to private enterprise. Usually the preference should be given to the public as against the individual. Supervision and registration are

functions of the Health-Department which do not enter into competition with private practice, except so far as disease is controlled, and no physician will raise his voice against such a tendency. The bacteriologist, chemist, and medical officers, of the Police and Fire Departments, as well as the administrative officials and lay assistants in the Health-Departments, usually receive fair compensation and a sufficiency for a living, though the professional services are obtained at a great reduction from prices which would be charged for private services of the same kind. All things considered, no hardship is involved, for there are just about enough positions with municipalities, state and national bureaus, and institutions of learning, to provide for the comparatively few men whose talents are in the direction of chemistry and bacteriology. It is recognized to be rather hard to draw the line between cases demanding examination for tubercle bacilli for the welfare of the state and the municipality, and those in which private interests are mainly concerned. On the whole, the benefit of the doubt must be given to any applicant, even though the interests of private bacteriologists suffer in consequence.

Coroner's physicians are usually paid on a basis of compensation for actual time and trouble and with the idea that their services to the city will not materially interfere with private practice. A few of the largest cities pay on the basis of securing the entire service. Here, too, no cause for complaint exists.

Some time ago we were interested in quite a thorough study of the payment of physicians for the poor of large cities and ascertained that, in most instances, such work was supplemental to private practice, and was paid for by salaries based on the principle of "If you don't like your job, you can get out, and we can find some one else hard up enough to take it gladly." The actual salaries varied considerably, but bore a quite constant relation to the amount of work, some cities being divided into as many districts as practicable, some into few, and, in the latter, the physician was supposed to give his whole time to the poor, and received a fair living salary. Usually, salaries varied between two and six hundred dollars, and the average rates per visit were about a quarter of the usual ones for private practice. Dispensary and hospital physicians, of course, receive no direct remuneration. Public vaccination is sometimes paid for at fair rates for the time involved, sometimes added to the duties of other city employes, without additional compensation.

On the whole, it may be said that municipal medicine conflicts with the proper business interests of the medical profession, only in regard to the care of the poor or dishonest. In this particular, the doctor is either not paid at all, or he is paid stingily, and on the devil's plan, "Thy necessity is my opportunity." We have never taken kindly to the theory that the physician should be a martyr, doing good broadcast and taking in return the little that an occasional patient may choose to fling to him. Our experience has been that this type of physician, however noble, is usually decidedly lacking in skill and common sense, and that satisfactory medicine, like everything else that is satisfactory, must have a reasonable business basis. We see no better reason why the city should demand free medical attendance for its proletariat than free shoes or free potatoes. We are hard-hearted enough to regard the proletariat, not as worthy humanity, but simply as an evil result of social organization, a burden which reputable citizens should share. But, we believe that the municipality should stop at no half-way measures. Either let it throw this burden on the medical profession as a matter of frank charity (or imposition), or else let it pay for the medical care of its poor at fair rates, as it does for their coal and groceries and lodging.

Substantial Fraternal Sympathy.

So often are medical men called unjustly to Court, and put to great expense, and even subjected to temporary loss of reputation, and in consequence their immediate means of livelihood, that it gives us great pleasure to note an incident in which general professional generosity became substantially manifest. The case in evidence is as follows: Recently, in London, Dr. Hall Hains, of Shepherd's Bush, was tried at the Central Criminal Court on an unfounded charge of performing an illegal operation. The gross injustice of the proceedings was so manifest that at the direction of Mr. Justice Ridley the jury stopped the case, and Doctor Hains left the Court completely cleared of any moral stain. As would be expected, the great hardship of the case was the extreme worry and considerable expense falling on Dr. Hains in defending his charge. Besides the mental anxiety and the temporary stigma, the costs of defence were over $4,000, and as a result of the shameful treatment Dr. Hains became financially embarrassed. A meeting was recently held at the residence of Dr. Joseph Smith, Bedford Park, W., and it was then determined to form an influential committee to aid in raising a fund to help Dr. Hains

to defray part of the heavy costs he has had to meet. The principal members of the Westminster Hospital, where Dr. Hains was formerly house-surgeon, have joined the Committee, and also subscribed to the fund. The Committee made an earnest appeal to the profession in general for Dr. Hains. A number of the most noted English medical men have joined heartily in the subscription, and we note with pleasure the substantial evidence of sympathy in the amounts subscribed.

It is by so acting in harmony and with righteous sympathy that physicians can avoid many blackmailing charges to which, by nature of their duties, they are unfortunately exposed. Many a medical man has submitted to such a persecution rather than acquire obnoxious notoriety and suspicion. Such *laissez-faire* policy only invites unprincipled persons to prey on the profession. By making a heroes instead of outcasts out of our brethren unjustly accused we will give them energy and courage to fight their defamers to the bitter end, regardless of public opinion and monetary cost.

Our duty to a medical man in such trouble is to think, not of his likely guilt and possible degradation, but of some means to aid him in proving his innocence. We should do all in our power to dissipate rather than encourage suspicion gathering about a neighbor's head. If some of us cannot feel generous to a rival, at least let us put ourselves in his place and consider that we may be the next victim! Then the solid consolation of having a united profession back of us when unjustly accused of a grave charge, may be properly understood.

A Case of Jealousy.

It is rarely that a disease absolutely new to the columns of a medical journal is reported, but in this connection Dr. William O'Neill, of Lincolnshire, England, in the *Lancet*, January 22, 1898, has presented a case which, though casually familar, is unique in its purely medical aspect.

Dr. O'Neill says: "Some years ago I was requested to visit a lady who it was represented to me was very ill, and who consequently required immediate attention. On entering the house I was shown into the so-called sick-room, in which there were three persons, all of whom seemed to me to be in good health. There were present an old lady (the owner of the house) and her daughter, who had arrived a few days previously from a neighboring county to spend two or three weeks with her

mother, and the daughter's husband, whose visit was only to be for a day or two. The man was about thirty-five years of age, small in stature, swarthy in complexion, and plain-looking. The wife was a striking contrast to her husband ; and she was rather tall, remarkably fair and handsome, and was a few years younger than her good man. After taking a seat I asked which of them was the patient, but no answer having been given to my inquiry I asked again. Then the younger lady, with some hesitation, said : 'I am the patient and my complaint is jealousy. I am jealous of my husband, and if you do not give me something to relieve me I shall go out of my mind.' This accusation against the little man seemed to me to be most ridiculous ; indeed, I could not help thinking that if the accuser had been the accused it would have been more in the nature of things. I assured the lady I was extremely sorry for her, the more so that I was quite incompetent to treat such a case. However, I advised that a wise mutual friend should be consulted who would make things pleasant between husband and wife, for that in all probability there were no grounds for her suspicions. The husband protested his innocence, and declared there was no cause whatever for her accusations. The wife persisted in reiterating them, and so the wrangle went on till suddenly she fell from her chair on the floor in a fit, the spasmodic movements of which were so strange and varied that it would be almost impossible to describe them. At one moment the patient was extended at full length with her body arched forwards in a state of opisthotonos. The next minute she was in a sitting position, with the legs drawn up, making, while her hands clutched her throat, a guttural noise. Then she would throw herself on her back and thrust her arms and legs about to the no small danger of those around her. Then becoming comparatively quiet and supine she would quiver all over while her eyelids trembled with great rapidity. This state perhaps would be followed by general convulsive movements in which she would put herself into the most grotesque postures and make the most unlovely grimaces. At last the fit ended, and exhausted and in tears she was put to bed. The patient was a lithe, muscular woman, and to restrain her movements during the attack with the assistance at hand was a matter of impossibility, so all that could be done was to prevent her injuring herself, and to sprinkle her freely with cold water. The after-treatment was more geographical than medical. The husband ceased doing business in a certain town where the object of his

wife's suspicions lived. He was enabled to do so by the kindness of a friend, who exchanged part of his district with him."

Dr. O'Neill assures us that this was not a case of epilepsy, for the muscular spasms of the patient were not exactly similar to those of that disease. Besides, there was no foaming at the mouth or biting of the tongue, and consciousness was not at any time fully at abeyance, as is the case in epilepsy. The attack was a well developed hysterical fit, with a good deal of cataleptic rigidity of the muscles. The doctor says the fit was not the disease, but it was the symptom or manifestation of a mind diseased or deranged, the state of the mind being the result of the woman's broodings over her real or imaginary wrongs.

The New Editors of the British Medical Journal.

Dr. Dawson Williams, the assistant editor, who for seventeen years has been connected with the editorial department of the *Journal*, has been appointed editor. The selection was unanimous, and is considered a just acknowledgement of meritorious service. Mr. C. Louis Taylor, the sub-editor, a gentleman long identified with many of the most successful medico-literary productions in Great Britain, has been appointed assistant editor. We congratulate the Association on the wise selection of its Council, and we extend our heartiest good-will and best wishes to the new editors.

BOOK-REVIEWS.

The American Text-Book of Operative Dentistry. Edited by Edward C. Kirk, D. D. S., Dean of the Dental Department of the University of Penna. Lea Bros. & Co., Philadelphia, and New York, 1897.

The mechanical make-up of the book is a credit to the publishers: the paper being good, the type large and plain, and the illustrations well defined. That a number of the more important of the latter have been made to suit the fancy, and are untrue to nature is not a fault of the publishers. In construction the work is after the plan of the "American System of Dentistry," published by the same house in 1893, there being fifteen different writers for the twenty-three chapters or subjects treated. While much can be said in commendation of this work, it may be reasonably questioned whether plurality in authorship has been a great gain. The plan adopted involves overlaping of subjects, repetition of matter, and considerable diversity of methods and teachings, all of which is confusing to the beginner, and of doubtful utility to the practitioner. These defects have been much better guarded in this work than in the "American Systsm." The authorship of "The American Text-

Book of Operative Dentistry" should warrant the statement that it embodies the latest and best in dental science, not only in discovery and practice, but in teaching also.

The claim is sharply made in some quarters that dentistry is a branch of medicine, hence our examination of this work has been with unusual care and interest that we might, if possible, clearly see this kinship and point the true connecting link uniting the two professions, as exhibited through this representative body. We have to confess that the claim seems wholly unsubstantiated in this, as in previous works on dentistry. It is mechanics, mechanical manipulation and mechanical appliances that receive consideration, and are persistently at the front.

The opening subject of one of the principal writers is "The Operator," and the first sentence is "The attitude of the body of the dental operator has considerable influence upon the ease with which the various positions required in operating may be assumed, and also has some bearing upon the freedom of the hands." Another begins his subject, "The importance of the proper preparation of a cavity for the insertion of a filling can scarcely be overestimated."

As if fully to accentuate the mechanics of operative dentistry some special appliances and instruments which have never found favor with dentists and are now obsolete, are illustrated and described with great minuteness, whilst the great field of etiology and prophylaxis is left pratically unexplored.

It cannot be claimed that the manner of treating the various subjects, with the mechanical detail, multiplicity of instruments and appliances, presents any common ground or furnishes much of interest to the medical man.

In the chapter on "Pyorrhea Alveolaris," by Prof. Pierce, following a succinct treatise on the history of this disorder there is an apparent determination to circumscribe it within the bounds of certain papers produced by the author between 1892 and 1895, wherein this trouble is regarded as a local manifestation of the gouty diathesis. In support of the theory, for as yet it is but theory, important facts and manifestations have been been overlooked or ignored, as also some recent and valuable contributions to the literature of the subject.

Inasmuch as nothing is really demonstrated respecting to etiology or treatment of this trouble, assumptions in support of theories seem out of place and must tend to mislead the student and to retard true investigation. Under "Discolored Teeth and Their Treatment," the editor discourses very intelligently on the rationale of the discoloration of teeth in general, but fails to mention the most important phenomena for both the practitioner of medicine and for the student of dentistry, viz.: that *young* teeth, owing to greater vascularity, are far more liable to rapid and persistent discoloration than the teeth of adults and middle life; and that to avoid discoloration in devitalization the arsenical application should be minute and placed in contact with the *dentine* and *never* in direct contact with the *pulp*. Teeth are colored very largely by mismanagement; to prevent this is much better than bleaching.

The chapters on "Extracting," by Dr. Cryer, and the "Extraction of Teeth Under Nitrous Oxyd Anesthesia," by Dr. Thomas seem to embrace all in the work of special value to the general practitioner. These subjects are treated in a highly satisfactory manner and cover a field of very considerable interest to the student of medicine and of usefulness to any called to the extraction of teeth.

Just here where the professions seem to touch in a common point begins their widest divergence.

BIENNIAL REPORT OF THE DEPARTMENT OF HEALTH OF THE CITY OF CHICAGO Being for the years 1895 and 1896.

Failure to publish a report of the department for the year 1895—the reason assigned being want of an appropriation therefor—has made it necessary to combine the reports of the two years, 1895–96 in one volume.

Since the reappointment of the present Commissioner the unfinished reports of divisions and bureaus for 1896] and the statistical matter, have been revised and completed and are herewith submitted as a biennial report.

The general excellence of the work of the department during these two years is due in large measure to Dr. F. W. Reilly, who was appointed Assistant Commissioner of Health by the present efficient Commissioner, Dr, Arthur R. Reynolds, who was unfortunately deposed for political reasons June 17, 1895, and wisely reappointed April 22, 1897.

Part I., of the report, includes reports of divisions and bureaus. Part II. includes elaborate tables of vital statistics.

The American Academy of Railway Surgeons. Report of the third annual meeting, held at Chicago, Ill., September 23, 24, and 25, 1896. Edited by R. Harvey Reed, M. D., Columbus, O. Chicago. American Medical Association Press. 1897. 8vo. pp. 282.

This little book records the proceedings of an interesting and valuable meeting. Its several chapters group together papers on expert testimony, fractures and trauma, injuries of the joints, and injuries of the eye, and some on miscellaneous subjects, including, first aid in railway injuries, past and present obstacles to the radical cure of hernia, medico-legal aspect of floating kidney, delirium of shock, diseases of railway men caused by their occupation, and burns and scalds. The papers, as a whole, are creditable, and the discussions which followed them manifest an active interest among the members of the Association. The two papers on expert testimony, one of them being the President's address, very clearly recount the advantages and disadvantages of this form of evidence; the good and the evil emanating from which, and the proper and improper uses to which it is capable of being put, are only too familiar in every court of justice.

The editor and the publisher of this small volume have done their book creditably.

Tuberculosis of the Genito-Urinary Organs, Male and Female. By N. Senn, M. D., Ph. D., L. L. D. Illustrated. Philadelphia. W. B. Saunders, 1897. 8vo. pp. 317.

Dr. Senn has contributed to surgical literature so much that is of the highest standard of excellence, his work being invariably characterized by thoroughness as well as progressiveness, that the present production is certain to attract the thoughtful attention of the profession. A treatise upon tubercular disease of the genito-urinary apparatus does, indeed, as the writer says, appear to "fill a gap in medical literature," and possesses interest that is not confined to the limited field of the specialist alone.

Of the eleven parts into which this book is divided, two are devoted to tuberculosis of the male genital organs, six to the affection as occurring in the female genital organs, and three to the disease as met with in the bladder, the ureters, and the kidneys. The author carefully presents to the reader the etiology and pathology of the disease in the various organs included in this group, giving an excellent resume of the literature, and a clear description of the symptoms and diagnostic points as established by the methods of modern investigation.

As to treatment, it is true, as he says, that both from the medical and surgical standpoint, it is "not in a very satisfactory state," but he tells us all that can be deduced from an evidently thorough knowledge of the views of progressive surgeons as contributed to its literature, coupled with accounts of his own clinical ex perience and observation. Doubtless, in the future more efficient means of combating tubercular

disease than any that have so far been subjected to trial will be at the command of the physician and the surgeon, but up to the present time palliation, in a large proportion of cases, is all that can be accomplished. Notably is this true in connection with the organs included in the present work. Surgical investigation has, however, when judiciously undertaken, produced many good results in this field of surgery, and the indications for it, and limitations applied to it, are very fairly stated by Dr. Senn.

We feel certain that this book will win for itself a high reputation, and we congratulate the author upon so satisfactorily accomplishing the task which he undertook in its preparation.

Chirurgie des Vois Urinaires Etudes Cliniques par le Dr. E. Loumeau. 2de Volume avec planches hors texte. Bordeaux. Feret et Fils. 1897. 8 vo. pp. 287.

This volume embraces a number of clinical studies previously published either in periodicals or in communications to different societies. The collection of so many valuable practical observations, illustrating many of the maladies of the urinary organs, into a single volume places them more readily at the command of those having occation to refer to the literature of the various affections which they embrace.

To review this book in detail would carry us far beyond the limits of the space allotted to us. We must content ourselves with saying that the descriptions of operations, reports of cases, and the observations upon them by the author present much that is interesting and cover a variety of subjects.

Surgical Diagnosis and Treatment. By J. W. MacDonald, M. D., Graduate in Medicine of the University of Edinburgh; Licentiate of the Royal College of Surgeons, Edinburgh; Professor of the Practice of Surgery and Clinical Surgery in Hamline University, Minneapolis, etc. With 328 illustrations. W. B. Saunders, Publisher, 925 Walnut Street, Philadelphia. 1898. Price, cloth, $5.00; one-half morocco, $6.00, net.

In his preface the author mentions the paucity of works on surgical diagnosis, having a claim to represent the most recent surgical knowledge; while the field of medical diagnosis is well covered by such excellent works as Da Costa, Vierordt, Musser, and others. The need for such a work is apparent to every practitioner, young or old, and the volume fulfills in every sense its acknowledged mission—to present the practical part of practical surgery. The author very wisely refers his readers to the special works for the surgery of the eye, ear, and skin. The systematic arrangement and the substantial make-up of the book inspires us with confidence, and we believe that Dr. Macdonald will be amply repaid for his careful and laborious work, which though necessarily in great part compilation, bears the marks of a strong individuality. The book is well filled with practical illustrations, and the typography is excellent.

Hand-Book of Materia Medica, Pharmacy, and Therapeutics, including the Physiological Action of Drugs, the Special Therapeutics of Disease, Official and Practical Pharmacy, and Minute Directions for Perscription Writing. By Samuel O. L. Potter, A. M., M, D., M. R. C. P., Lond., Professor of the Principles and Practice of Medicine in the College of Physicians and Surgeons of San Francisco, etc., etc.; sixth edition, fully revised and greatly enlarged. P. Blakiston, Son & Co., Publishers. 1012 Walnut Street, Philadelphia. 1897. Price in cloth, $4.50.

The new sixth edition of this well-known book is fully one-eighth larger than

its immediate predecessor, and is almost a new book, although retaining the general plan and especial features which proved so acceptable in previous editions. The text has been thorouhgly revised and largely rewritten. An important addition to the contents is a thorough and concise treatment of serum-therapy. All the newest drugs and chemicals are noted, and many new articles are inserted in the section on Therapeutics. The previous editions have been favorably received before in this magazine, and only an extra word of praise for the new edition is necessary.

PRACTICAL PATHOLOGY FOR STUDENTS AND PHYSICIANS. By Aldred Scott Warthin, Ph. D., M. D., Instructor in Pathology, University of Michigan. A Manual of Laboratory and Postmortem Technic, designed especially for the use of Junior and Senior Students in Pathology at the University of Michigan. George Wahr, Publisher and Bookseller, Ann Arbor, Michigan. 1897.

This work represents a suitable and fairly complete laboratory course in pathology for medical students. The work is divided into two parts with separate numbering of the pages, Part II. alone possessing an index. The first part deals with the making of postmortems and with the collection of material for microscopical study, the second with treatment of the material. One misses some of the newer ways of using, formalin as in the preservation of the natural color of specimens. No mention is made is made of the ethyl-chloride method of preparing frozen sections, or of Florence's method in the examination of semen stains; nor is the method of Bremer, in regard to testing the blood of diabetes by means of aniline colors touched upon, nor Weigert's new method of staining the neuroglia. The typography and manufacture of the book are none of the best.

PATHOLOGICAL TECHNIQUE. By Frank Burr Mallory, A. M., M. D., Assistant Professor of Pathology, Harvard University Medical School; Assitant Pathologist to the Boston City Hospital; Pathologist to the Children's Hospital and to the Carney Hospital; and James Homer Wright, A. M., M. D., Director of the Laboratory of the Massachusetts General Hospital; Instructor in Pathology, Harvard University Medical School. Philadelphia. W. B. Saunders. 1897. pp. 397. Price, $2.50, net.

This book, although specially designed as a hand-book for the laboratory will be found of great value to the general practitioner who needs light on the modern methods of pathologic research. The style is particularly clear, and the methods of procedure are stated with such careful attention to details that the students as well as practitioners will welcome this latest addition to our text-books. Recognizing that most of our pathologic work begins with a postmortem examination the authors introduce a prefatory chapter on the best way to conduct an autopsy. Part II. is devoted to bacteriologic examinations. The apparatus, the various culture media, and the methods of studying bacteria in cultures, are fully described. A valuable part of this section are the chapters on bacteriologic examinations at autopsies and on bacteriologic diagnosis and clinical bacteriology. About half the volume is devoted to histologic methods. In this we have the necessary appliances, stains, and imbedding processes, clearly detailed. The authors confine themselves, however, to those methods which they find by practical experience to give the best results. They advise a method of preparing blood-serum tubes which has special advantages when used in connection with their blood-serum coagulator. The morphology and methods of cultivation of the bacillus of influenza are included and the process and value of lumbar puncture as a diagnostic measure are carefully described. Dr. A. H. Wentworth, who furnished the notes on the latter subject, also contributes sections on the blood and on malaria. The volume is admirably printed from large type and presents a handsome appearance.

MASTOID ABSCESSES AND THEIR TREATMENT. A. Broca and F. Lubet-Barbon, translated and edited by H. J. Curtis. xiimo., 268 pp., 6 pl. N. K. Lewis, London, 1897.

The translation of the excellent monograph which received the Prix Meynot of the French Academy of Medicine in 1894, gives us a handy volume, with some useful illustrations and 130 well detailed and classified case-histories, admirable elucidating this important field of surgery. The general discussion waives most etiologic matters and excludes the very important subject of choleseatoma, which should hardly be thus set apart, however far its consideration might lead; but general surgical and pathological principles are well cited and applied, and the work is more complete than it claims to be. The prime matter of proper classification of the mastoid conditions into fistulous or intact, acute, subacute, or chronic, and as resulting from acute or chronic tympanic inflammation, permits of differentiation of the widely differing cases and valuable comparison of results, as is all too often impossible in even more extensive studies. Thus such points can be seen at a glance in the summaries as that recovery with perfect hearing was almost invariable in the acute abscesses from acute tympanic suppuration, since of 49 operations 43 recovered, but two of the five requiring cleaning out of the tympanum having any trace of discharge, while two more were nearly well in six weeks, two had relapsed because of inadequate operation or care, subsequently and two died from unrelated affections. A better showing could hardly be asked by the general surgeon; while the aurist will note that there had been no sacrifice of the hearing in any case. Similarly he shows for the cases due to chronic suppuration and treated by free opening of the tympanic and mastoid cavities that among 50 cases no longer under treatment there were 26 full recoveries and nine with a very slight otorrhea; while of the twelve deaths, five were from meningitis previously recognized, four from tuberculosis, and one from measles-pneumonia, one from late supervening, and one from early cerebral complications. In the last only could the operation be imagined to have prejudiced the result.

The authors rightly lay stress upon the essential condition that the communication with the pharynx makes the lesion "a blind internal fistula" even if not open upon the mastoid or through the drumhead, rendering complete asepsis impossible and demanding some patience when results are not promptly as ideal as in better fields. They contend for early and radical operation, instead of timid delay or incomplete procedure, even in albuminuric or meningitic conditions which greatly lessen the chance of success. "Wilde's incision ought to be definitely given up," and all needful steps taken at once "without trusting to nature, whose weak-willed trustors" let their opportunities slip through their fingers. Prevention is fairly discussed with due stress upon free drainage, inflation, cold and leeching; vessication and such measures are condemned. Heat is not advocated nor is rest in bed accorded its due importence. In operation, the anatomical and pathological conditions are to be precisely met, and as these vary, no one procedure is to be exclusively employed. Schwartz is closely followed; but the authors would seem less radical than they undertake to be, since they have so rarely laid bare the dura in pursuing the lesion to its end and seem never to have opened the sigmoid sinus in curetting its diseased wall; while five instances of facial paralysis among 68 radical operations is a rather large proportion, and shows that good luck has not attended them in this regard.

Some anatomical inaccuracies and translation errors are to be noted, as "We must keep at least o. 5 cm. distant on the surface because the meatus is directly *posteriorly* (up and forward), and one *does not fail* to get into the deeper structures if this distance is not preserved." ("Cerebral abscesses * * * occupy almost always the *temporal* lobe in children." The supra-meatal spine which ordinarily is found situated at the level of the *roof* (floor) of the antrum.") As a whole the work is a decided contribution to aural surgery and its presentation to English readers merits wide recognition.

MEDICAL NEWS AND MISCELLANY.

Dr. Theophilus Parvin, the well-known obstetrician and gynecologist, Professor of Obstetrics in the Jefferson Medical College of Philadelphia, is dead.

A Quarantine Convention of the South Atlantic and Gulf States, will assemble in the City of Mobile, Alabama, on the 9th day of February, 1898, at 10 o'clock, A. M. The objects of the convention are to study the subject of quarantine in its relations to epidemic diseases in general, and to yellow fever especially. It is arranged that the investigation shall be conducted from every point of view, as may be seen by reference to the program. Lawyers, doctors, preachers, merchants, railroad officials, journalists, and representatives of the national and state governments will participate in the convention.

Small-Pox in Cuba.—The sanitary inspector of the United States Marine Hospital Service stationed in Havana, reports to the Supervising Surgeon-General that deaths from small-pox are now increasing in number as those from yellow fever grow less. During the week ending January 14, only four cases of yellow fever resulted fatally in Havana, three of them being in the military hospital. Deaths from small-pox, however, have greatly increased, and the report predicts that the disease will spread rapidly during the next few weeks.

Small-Pox at Birmingham, Ala.—The Marine Hospital Service reports an epidemic of small-pox at Birmingham. At the present time one hundred and thirty-one patients are under treatment.

A Just Verdict.—The New York Ophthalmic Hospital obtained a verdict against a man who was treated at that hospital and represented himself as unable to pay, but who afterwards was found to be very wealthy.

The Dangers of Barber-Shops.—In a recent issue of the *Maryland Medical Journal*, Dr. H. A. Robbins shows the dangers of the barber-shop. The chances of contracting venereal diseases there, however, are small as compared with parasitic diseases. There is in Baltimore a barber-shop where the greatest possible precautions are taken to prevent infection, the combs, brush-backs and handles, razor-handles and cups and everything used being made of aluminum, and all articles, including soap and towels, are subjected to careful sterilization.

An Army Medical Board will be in session in Washington during the month of May for the examination of candidates for appointment to the Medical Corps of the United States Army to fill existing vacancies. Candidates must be between twenty-two and twenty-nine and be graduates of a regular medical college. Applications should be made to the Secretary of War before April 15, 1898.

The Poison of Bees.—It is generally assumed that the poison of the sting of the bee is formic acid. Langer, however, finds that this is only partly true; the bee poison which he examined was a bitter tasting liquid with an agreeable odor, which, although it contained formic acid, when diluted to a 1 per cent. solution, so that it no longer gave an acid reaction to litmus, still possessed appreciable physiologic action. Moreover, when kept at a temperature of 100° for over six weeks, so that all the formic acid was entirely volatilized, the liquid still produced hyperemia of the conjunctivæ when introduced into the sac. Langer has isolated the active principle, which he finds gives alkaloidal reactions, is unaffected by heat or cold, or by acids. Injected into the veins of animals it produces effects similar to the venom of serpents.

Discovery of an Agglutination Test in the Diagnosis of Yellow Fever.—The news comes New Orleans that Drs. S. E. Archinard and R. S. Woodson, of the United States Army, have discovered an agglutination test to be used in the diagnosis of yellow fever. The test is made in the following manner: A drop of blood is taken from the lobe of the ear of the patient and dissolved in twenty times its volume of sterilized water. This is then placed in a culture-tube containing yellow-fever germs which have been active and increasing for twenty-four hours. In from five to thirty minutes after the drop of suspected blood dissolved in twenty times its volume is put into the culture-tube, the germs in the blood become agglutinated and motility ceases entirely, which shows that the blood is that of a yellow fever patient. If, however, agglutination does not take place, yellow fever is not present. The yellow fever germ has been found in between 87 and 90 per cent. of the cases in which this test has been employed, therefore it must be superior to that of Sanarelli by means of which the germ was found in only 47 per cent. of the cases. —*Medical News.*

The Astley-Cooper Prize of the value of £300, awarded biennally by Guy's Hospital, will again be given at the beginning of 1901, the subject being the "Physiology of the Pancreas."

The Parkin Prize of the Paris Academy of Sciences has been awarded to Dr. A. D. Waller, of London, for his investigations on the relations of nervous activity and carbon dioxide. The prize is of the value of about $600.

The Ninth International Congress of Hygiene and Demography will be held in Madrid, April 10–17, 1898, under the patronage of His Majesty King Alfonso XIII. and Her Majesty the Queen Regent, The provisional program and the regulations have been issued by the Secretary-General, Dr. Amalio Gimeno.

Concerning So-Called "New Editions."—At the recent international congress of publishers, held at Brussels, a recommendation was made that is of special interest to men of science, and should be insisted upon by them in arrangements with their publishers. The resolution was to the effect that a mere new printing of a book should be called a *tirage*, and not a new edition, unless it has been revised by the author.

Jules Emile Pean, the eminent surgeon, is dead. M. Pean, who was born at Chateaudun (Eure-et-Loire), November 29, 1830, practiced surgery continuously in Paris for more than forty-five years. In 1865 he was appointed surgeon of the Central Bureau. Two years later he joined the staff of the Lourcine, where he remained five years, going then to Saint Antoine and finally to Saint Louis, where he remained until 1892. In 1887 he was elected a member of the Academy of Medicine. Three years later he received the decoration of the Legion of Honor, and in 1893 he was made a commander.

Sodium Formate in Pneumonia.—Rochon finds formate of sodium to be a useful remedy in pneumonia, especially in the croupous forms of which children are subject. To these it is given in daily doses of thirty to fifty centigrams; adults may take from one two grams. The fever rapidly diminishes and profuse perspiration is produced, together with a slight looseness of the bowels.—*Pharm. Zeitung, xlii., 546.*

Dr. Ernest Mesnet, the celebrated French neurologist, died in Paris, January 20, 1898.

How to Become a Consultant.—Dr. Osler recently said: "A young man should look for a consultation practice after twenty years of hard work in any town of forty or fifty thousand inhabitants. "Many are called; few are chosen." But even after he had reached the period of "cake and ale" there are many drawbacks. There are two circles—an intra-professional and an extra-professional one. In his efforts to keep up with a trying consultation practice, and at the same time keep abreast of all the new things known to the younger men in the "bread-and-butter stage," the consultant should, indeed, arouse our sincere sympathy. Again, the consultant must walk with the boys, or he would be gradually but inevitably lost. In order to keep his own mind receptive and impressionable, he must travel with physicians between twenty-five and forty years of age. At some time or other there would come the temptation to court

the Delilah of the press—lay or medical. It should be borne in mind that she was sure to pay false in the long run, and that the young physician yielding to her allurements would certainly be shorn of his strength and reputation. It could not be denied that a little humbug succeeded immensely with the public, but it was not necessary. In a certain city were three physicians of such eminence that all present would recognize them were their names mentioned. The first was a good physician, but no humbug ; the second was no physician, but a great humbug ; the third was a great physician and a great humbug. The first achieved the greatest success. "Better a handful of quietness than both hands filled with vexation of spirit."

The Ethnology of Kissing.—The kiss was unknown among the aboriginal tribes of America and of Central Africa. From the most ancient times, however, it has been familiar to the Asiatic and European races. The Latins divided it into three forms—the *osculum*, the *basium*, and the *suavium* ; the first being the kiss of friendship and respect, the second of ceremony and third of love. The Semites always knew the kiss, and Job speaks of it as part of the sacred rites, as it is to-day in the Roman Church.

The Mongolian kiss, however, is not the same as that which prevails with us. In it the lips do not touch the surface of the person kissed. The nose is brought into light contact with the cheek, forehead or hand ; the breath is drawn slowly through the nostrils, and the act ends with a slight smack of the lips. The Chinese consider our mode of kissing full of coarse suggestiveness, and our writers regard their method with equal disdain.

Darwin and other naturalists have attempted to trace back the kiss to the act of the lower animals who seize their prey with their teeth, etc. An interesting recent study of the subject is by M. Paul d'Enjoy, in rhe *Bulletin* of the Paris Anthropological Society, Vol. VIII., No. 2.—*Science*.

A Monument to Tarnier.—According to *Le Progrès médical*, the medical associates of Tariner are agitating the erection of a monument to him in Paris.

Dr. Victor C. Vaughan is credited with saying that more money is spent in the investigation of hog cholera than has ever been spent in the study of the diseases that man is heir to.

Au English Centenarian.—Mrs. Jane Blowers, an inhabitant of a charitable institution at Clapham, London, recently celebrated her 118th birthday.

Diseases of Fiction.—The *Medical Record* calls attention to the small number of diseases brought into the service of the novelist. At one time brain fever was the universal favorite, with typhoid a good second, and although within recent year neurosis has to a certain extent banished brain fever from its proud position, yet the latter disease still holds its own in fiction. That nervous prostration is much more likely to attack the hero or heroine suffering from the storm and stress of life, as depicted in the ordinary modern novel, than is brain fever, cannot be denied. Nevertheless, there are occasions when an author, in order to extricate himself from a complicated situation, is compelled to fall back upon a disease of an acute nature ; and in such a predicament, what so suitable as brain fever, or what so convenient as its delirous ravings? The fact has been more than once pointed out that there is a disease which has been strangely overlooked, and which certainly deserves to find more favor in the eyes of the novelist than has hitherto been the case. This complaint is pneumonia, for while it fulfils all the conditions required by the novelist, and to a fuller extent than brain fever, it has none of the disagreeable associations connected with typhoid. Pneumonia may be termed an aristocratic disease, while typhoid, though no respecter of persons, still has a certain plebeian flavor savoring of foul-smelling drains and tainted water. In novels acute diseases invariably end suddenly. Pneumonia terminates by crisis ; the onset of the attack is sudden, the temperature is always high ; delirium, stupor, or complete unconsciousness is a feature in its progress. Thus in this disease there is a choice of dramatic climax found in no other malady. A wicked man can be cut off in the midst of his sins, or a good one can be made to provide an edifying death-bed scene. Pneumonia may be recommended to authors as a disease whose merits as an aid to fiction have not as yet received the appreciation from them which is undoubtedly due.

Eight Infants in Six Years at the Age of 18.—We learn through the *Gazette médicale de Paris* that the superintendent of the Poor Service, St. Louis, Mo., has recently had an application for succour from a negress of 18, who though married six years has had eight children—twins four times, three of which were living. At the time of application she was about to be confined again.

Cigars and Nicotine.—A German journal says that after a long search, Professor Gerold, of Halle, has found the means of neutralizing the action of nicotine in cigars. During the process of manufacture the leaves of tobacco are steeped in a decoction, the principal element of which is wild marjoram (*origanum vulgaris*). Gerold claims that by this means the deleterious effects of tobacco are avoided, and yet the quality and aroma are not altered.

The Effects of Modern Projectiles in Warfare.—The interesting paper recently read by Mr. Henry J. Davis before the West London Medico-Chirurgical Society upon "Gunshot Injuries in the late Greco-Turkish War," and published in the current number of the *West London Medical Journal*, throws a good deal of light upon a subject concerning which not much information as yet exists. Practically, only three kinds of rifle bullets were employed in the war. The Greeks used the Le Gras French rifle, with a Chassepôt lever action; and the Turks were armed chiefly with the Martini Henri, while some of the Turkish brigades had the German Mauser magazine rifle. But Mr. Davis never came across a single wound in which a Mauser bullet had been lodged. He accounts for this by stating that the terrific velocity of this bullet—it is effective 4,000 yards—is such that it passes through everything, soft parts and bones, and does not remain in the body. In consequence of this the wounds which it inflicts are much less severe than those caused by the Martini bullet which, on the other hand, usually splinters a bone in all directions. The reference to the nickel casing of bullets, such as the Mauser, the first Lee-Metfords, and others, introduces an interesting detail. In the late Chitral expedition the English troops noticed that their Lee-Metford bullets did not stop the tribesmen in their wild rushes, and hence the ingenious and practical device was resorted to of cutting through the nickel nose of the bullet or of rubbing it against a stone, thus exposing the soft lead core. The effect of this was that the bullet proved perfectly satisfactory as an agent of disablement and destruction. A curious instance is given of the enormous velocity of the Lee-Metford. A trooper fired three shots at an old donkey which was eating hay in a paddock. The bullets passed clean through it, but the animal continued to eat just if nothing had happened, and it was not until some time afterwards that it began to show any uneasiness. However, the remarks upon the now famous "Dum Dum" bullet will probably prove of most interest to those outside mililary circles. The name is derived from the Government manufactory in India, and the present war on the frontier is the first occasion on which they have been used. The bullet resembles a slate pencil, and is a modification of the latest Lee-Metford, but the nickel shield is thinner, and the soft nose is flat, and does not project so far from the nickel envelope. On impact it collapses like a concertina, making so ghastly a wound, that, Mr. Davis asserts, in all probability its use would be forbidden in European warfare. In Mr. Davis' experience with the war, the point with which he was most struck was that of the comparatively small damage inflicted with rifle bullets. In the large majority of cases the bullets had passed clean through the wounded men, leaving a minute black aperture at each end of their track—upon the whole in reflecting upon the facts to which attention is drawn in this paper, it would seem fair to assume that modern projectiles tend more to disable a sodier than to kill him; that is to say, he runs more chances of

receiving a slight disabling wound than of being killed by a more severe one. Again, in taking into consideration the chances of life after even a severe injury, it should be remembered that these are much greater than has been the case before. The resources of modern surgery are such that if a man be not killed outright, the chances for the most part are all in his favor that his life will be saved. However, it would not be possible to make any forecast of the results of the killed and wounded in the next great European war ; the probability, perhaps, is that the proportion would be very high, but this would doubtless largely depend upon how the troops were manœuvred, and the nature of the work which they were called upon to carry out. But with such weapons of precision now forming the "slaying machines" of modern armies, everyone with humane feelings will earnestly hope that it will be long before the opportunity for testing these machines will arise.—*Medical Press and Circular.*

Mr. Hall Caine's aspirations to medico-literary writing suffered a severe blow at the hands of the *British Medical Journal.* In criticising "The Christian," this journal says : "While Glory Quayle is probationer at 'St. Martha's' she is represented as doing and seeing things which never come within the range of a first-year probationer ; namely, on the first night of her arrival she is turned loose by the housekeeper to roam where she will through the hospital. In her first letter home she relates how a drunken house surgeon wishes to inject morphine into a patient recovering from kidney trouble, and she—the probationer of a month or so—suggests to the patient to feign sleep, while she tells the doctor she has lost the syringe. Mr. Caine's hospital is one in which there is an absence of discipline, a hospital in which a probationer can run a course of unfettered license, outraging all ideas of decency, in which she can twist the authorities round her fingers, and make it routine administer to an unbridled love of pleasure—a picture of a hospital which we are proud to say is not to be found within the four seas. The nursing profession naturally feels itself much aggrieved by this false portraiture and gross perversion of the truth. This is no caricature ; it is a monstrosity ; and its exhibition in a popular book is, in our opinion, a grave offence against that good taste which should always control a writer in describing any particular class of the community.—*American Medical Journalist.*

Stokers' Cramps.—At a meeting of the Medical and Surgical Society of the District of Columbia, November, 1897, Dr. Randolph M. Myers read a paper on "Cramps as Affecting Stokers." During the time he was ship-surgeon he never saw an American stoker ; they were usually young men from all the large seaports of Europe. These men work from four to six hours in a high temperature with an interim equally as long. They are

poor looking specimens of humanity, being thin and cadaverous, but very muscular. While on shore they indulge in all forms of dissipation and about the second day out they are suddenly seized with violent cramps in the muscles of the legs ; which progress up the back and around the chest. They are often unconscious for from five minutes to two hours. The pulse is weak and thready and the skin hot. On coming out of an attack they have pain in the abdomen and constipation and are laid up for two to three days. These attacks are more commonon the trip out from New York. The temperature has no effect, being the same in summer and winter. Some men seem exempt, but if they have one attack they will invariably have another. Treatment consists mostly of large doses of opium in some form, followed by castor oil and Epsom salts.

"**Rheumatoid Arthritis Affecting Bones 5,500 Years Old**" is the title of a paper by W. Page May in the *British Medical Journal*, Dec. 4, 1897. The bones were discovered by Dr. Flinders in the middle of a cemetery of the Fifth Dynasty, at Deshasheh, Egypt. There is no doubt as to the age of the bones, and even the accompanying plates show the pathognomonic signs of rheumatoid arthritis (osteitis deformans.)

The Inoculation of Small-Pox in Abyssinia.—It is said that inoculatian has been practised by the Abyssians for the past two hundred years. According to a Russian correspondent the Negus Menelik, himself pox-marked, was desirous of sending a paper on this subject to the International Medical Congress.

The Skulls of Voltaire and Rousseau.—Pathologists and scientists generally are much interested in the results of the recent official examination of the contents of the coffins of Voltaire and Rousseau in the vaults of the Pantheon. Both skulls are well preserved, and casts taken of them furnish a striking confirmation of modern theories of the mental differences between the long-headed and broad-headed races. Voltaire was pre-eminently the person whom biologists would expect to have been dolichocephalous, while Rouuseau was quite as distinctly brachycephalous. And so their skulls show them to have been, each in an extreme degree. Incidentally, the search revealed the falsity of the accepted story that Rousseau blew his brains out. His skull shows no traces whatever of injury of any kind.

Incubators for Infants.—Dr. Vallin, of Paris, estimates the number of prematurely born infants at from 15 to per cent. of births. Dr. Jules Bouvier, of Beyrouth, puts the number of newly-born debilitated infants at 5 per cent. of births. There is a wide discrepancy in these figures, but it is absolutely certain that there are a very large number of

children born who will quickly die unless the greatest care is taken of them. Of these children, according to Uffelmann, only 20 per cent. live twelve months, and 11 per cent. two years. Of 1,961 children born at the Paris Maternity Hospital in 1881, 641 were premature births. The mortality during the first two weeks of the prematurely born amounted to 32 per cent.; that of the other infants was equal to 8.62. The chief desideratum with weakly and prematurely born infants is to keep them warm and in an even temperature. In the olden time children after birth were frequently wrapped in sheep skins with the wool inside, and at the present time various devices are resorted to in order to maintain an even temperature. None of these methods, however, are by any means efficacious. About sixty years ago Dr. Credé, of Leipzig, constructed a box with double metallic sides; the space between these two walls could be filled with hot water, so as to maintain the desired temperature. Dr. Tarnier, the designer of the modern "couveuse," received the idea from the artificial "couveuses" at the "Jardin d'acclimatation" for the rearing of poultry. The question of incubators has aroused much interest in England. During last summer an incubator show was held in London, and there has been erected at Kensington a structure where weakly children can be nursed and kept in new and model "couveuses." These latest incubators are somewhat elaborate affairs, but they work automatically, reqiure no constant care and are said to fulfil their purpose exceeding well. As yet incubators have only been available for the rich, but it is proposed to establish in London and other large centers, incubator stations, from which, in answer to a message or telegram, incubators will be promptly despatched to whatever place they are needed. —*Pediatrics.*

Dime Museum Enterprise.—Apropos of incubators the following is an announcement of a Philadelphia Dime Museum:

THE WONDER OF THE AGE.

BABIES HATCHED BY MACHINERY.

"Exhibited for the first time in public the latest improved Baby Incubator, in which a feeble human waif which, on Wednesday last weighed three pounds, is to be transformed by science into a healthy, chubby cherub. A marvelous mechanical mother nurturing a tiny weakling. A triumph of scientific achievement. Come and watch the baby grow. It went in—a strange-looking, uncanny, faint anatomical shadow. It will come out—a rosy-cheeked, dimpled cooing, gurgling baby. The skillful physicians and trained nurses in constant attendance will gladly answer all questions concerning the treatment and progress of the baby. A specialist has been engaged to deliver an interesting and instructive explanatory lecture. Every movement of the baby may be viewed through the plate glass front of the wonderful Incubator."

Kipling on Doctors.—Rudyard Kipling, at the annual dinner of the Harveian Society of London, replied to the toast of "The Visitors." He said he had been thrown much in the company of Medical men in all parts of the world, and he admired them. He had seen them going to certain death with no hope of reward, because it was "business." He had also seen them handling cholera and smallpox, and when dying therefrom, wiring for a substitute. He had seen them in Vermont manage a practice twenty miles in each direction, driving horses through eight feet of snow to attend an operation ten miles away, and digging their horses out of the snow and proceeding. It was one of the proudest things of his life, he said, to have been associated with "real fighting men of this class."

The Prince of Wales's Hospital Fund.—His Royal Highness, the Prince of Wales, K. G., after consultation with the Council of his Hospital Fund for London, has decided to distribute the funds at his disposal for the year 1897, in the following way, viz. :—£22,050, representing the annual subscriptions promised *plus* the amount of interest on investments already made, which sum will be divided among the hospitals where more than 100 beds are in constant occupation. The moneys received from the sale of stamps, probably about £38,000, will be divided among such institutions as come under the classification of hospitals. The above-mentioned items, amounting together to about £60,000, which his Royal Highness will distribute this year, ought considerably to diminish the deficit which has been so long complained of. Wards which, for want of funds, have been closed at Guy's and St. Thomas's and other hospitals, will be at once reopened, and the requirements of other hospitals will be met. The Prince of Wales's Fund will thus meet requirements which neither annual subscriptions nor Hospital Saturday and Sunday Funds have hitherto been able to deal with.—"Medical Times and Hospital Gazette."

The Determination of Sex Theory, associated with the name of Professor Schenk, does not find much favor with savants. With the qualifying *ifs* and the usual loopholes of explanation in problems of the 50 per cent. variety, not much can be expected. "Guess," said Sambo, "boy or girl?" "Boy?" "No, guess again." "Then a girl." "Yes, but who told you?" It is to be hoped that we are to have no more depopulating agencies, remote or otherwise.—"Journal American Medical Association."

Doctor—"Now what did your father and mother die of?"

Applicant—"Well, sir, I can't say as I do 'xactly remember; but 'twarn't nonthin' serious."—"Punch."

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ORIGINAL COMMUNICATIONS.

A STUDY OF THE BLIND.

An Analysis of 180 Pupils of the Pennsylvania Institution for the Instruction of the Blind.

By F. Savary Pearce, M. D.

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[Read before the College of Physicians of Philadelphia, December 1, 1897.]

In taking up this work of classification of the physical and mental characteristics of the blind, one cannot hope to draw fast lines between them and those of persons with normal vision, especially when we remember that the word blind is used in the broad sense of markedly restricted power of vision due to central or peripheral disease of the visual apparatus; and that the totally blind individual is in the minority, while the congenitally totally blind person is but rarely seen. A study of these same characteristics in adults with no light-perception dating back to birth would no doubt reveal mental phenomena that are clearly distinct from those of healthy people of normal vision. For example, could they have visual hallucinations? Dr. S. Weir Mitchell has suggested the possibility of such being aroused by drugs known to produce visual hallucinations in the seeing.[1]

We will endeavor in this analysis, however, to point out the general trend of the influence of limitation of sight upon the human being, and to express some thoughts that have been led up to in the study by tabulation, then of the subject as a whole as it presented during the past eight months that the examinations have been made.

It was at the desire of Mr. Edward E. Allen, Principal of the Institu-

1—British Medical Journal, Dec. 5, 1896.

tion, who wished to secure vital statistics[1] of the blind, and through the kindness of Dr. Charles A. Oliver, who suggested the writer, that this study was undertaken.

Etiology.[2] Causation of blindness of the class of patients received into the Institution is given in the valuable paper of Dr. George C. Harlan as long ago as 1873, when 167 pupils were reported[3] upon. We have not gone into this subject further than to note that ophthalmia neonatorum is a less frequent cause of the eye condition in those admitted at the present day than in 1873. Dr. Charles A. Oliver, in a personal communication, has informed me in regard to a peculiar family type of blindness of which he is collecting data for a future publication—i.e., optic atrophy sequent upon retro-bulbar neuritis, beginning at about the age of adolescence, and, as a rule, attacking the males through unaffected mothers (atavism), which is so common in hereditary eye affections, and without other gross evidence of neural disease. The optic atrophy, as pointed out by Prof. Norris and others, is very insidious, taking many years, as a rule, before blindness occurs. Three cases of this type—two brothers and one sister—are pupils at the Institution, and are included among the subjects of this investigation.

There were ninety-five boys and eighty-five girls examined from the school, and a number of observations of blind adults connected with the Institution, as teachers or assistants; one of these latter being of the rarer case of a congenitally totally blind man, sixty-five years of age.

The average age of the male pupils was fourteen years and ten months; the average age of the female pupils was fifteen years and five months.

The pupils are gathered from thirty-six counties of Pennsylvania and New Jersey. Upon examination it was found that about one-half were taken from Philadelphia. As seen, most of them came from the centres of population, due perhaps more to the number of cases of blindness being in proportion to the number of inhabitants; and secondly, to environment we may attribute a disproportionate increase of eye diseases in crowded communities, dependent upon trauma and an increase of pathogenic bacteria and media for propagation. That modern sanitation and hygiene of the eye are causing fewer cases of total blindness, appears from studying the reports of this Institution, and, in the consideration of the plans for a new building soon to be erected at Overbrook, it has not been deemed necessary to accommodate more than 200 pupils, perhaps a fair representation for Eastern Pennsylvania; there being another school of fifty pupils at Pittsburg.

1—"Should the Use of Tobacco in all its Forms be Interdicted in Schools for the Blind?" By Edward E. Allen. Transactions of the Fourteenth Biennial Meeting of the American Association of Instructors of the Blind, 1896.

2—For a recent full dissertation on causation of blindness in general, see A System of Diseases of the Eye (Norris and Oliver), vol. ii., pp.419-462, article by I. Minis Hays, M. D.

3—"Report of an Examination of 167 Inmates of the Pennsylvania Institution for the Instruction of the Blind. The American Journal of the Medical Sciences, April, 1873.

The point is made to accept only educable young pupils, so that these investigations bear on the medium classes chiefly.

Hearing. As a rule, this sense is highly acute in the blind. In testing the special sense of hearing the following was observed: The pupils were taken one at a time into the quiet of a gymnasium-hall, and permitted to move, guided noiselessly over the smooth floor toward a watch which was suspended from a bar situated at some distance from the farther wall or other resounding medium; the watch was lowered or elevated for each pupil tested, so as to bring it on a level with the ear. The head of the subject was projected toward the right, and the scholar requested or allowed to find the position of greatest acuity, when a fixed scale of feet and inches marked upon the floor gave the hearing distance. The position was now reversed, and the test made with the opposite ear. About ten minutes was the time limit for each testing, so that the results are accurate and practical.

In some subjects it took a much longer time to make the test, which, however, was never hurried. The same watch was employed in all tests.

In less intelligent pupils it often took a much longer time-limit to make the hearing-test, but the distance of recognition in such was not lessened as compared with that of the normally mentally healthy : a psychological obtundity !

It will be noted in the tests for hearing that there is a wide range of difference in the large majority of cases as to the acuity of audition between the right and the left ear.

The average distance for the left ear in the boys was about fourteen feet, while that for the right ear was about fifteen feet. The average in the girls was for the right ear thirteen feet, and for the left ear twelve feet. One case was almost totally deaf; some in one ear only. Ear-disease was not prominent enough to alter the disparity between acuity of hearing in each ear in the sum total. Tests were made in classes as they stood in the school. It would appear that greater acuity of hearing in one ear as compared with the other in blind persons, where the auditory organs are normal, may depend upon education of the one sense organ beyond that of the other; for in observation of their attitude when addressed it will be frequently noted that one side of the head is presented toward the origin of sound, and with cultivation of this habit it would seem reasonable that the auditory centres become more specialized on the practised side. No doubt, too, differences of the same nature within less bounds would be noted in the seeing with a normal aural development.

A series of tests to act as checks should be made upon those with normal vision and hearing, to make the above study complete. I have been unable as yet to make this observation on a series of seeing pupils. Inquiry at the Penn Charter School revealed that such was not recorded there among the 400 pupils. A series of tests upon eight teachers at the Institution shows more equality and regularity, but none heard as far as some of their blind pupils.

An investigation into the fields of audition, suggested by Dr. Oliver,

Partial Tabulation of Records Embodied in the Text.

Males.

Mental condition.	Physical condition.	Senses, hearing, etc.	Senses, acute, touch, etc.	Nystagmus.	Degree of blindness.	Supposed cause.	Chest measurement.	Position of head in walking.	Spinal curvature and skeleton.	Heart and lungs.	Shape and circumference of head.	Teeth and mouth.	Muscular development, atrophy.	Diathesis, tubercular, etc.	Temperament.	Age afflicted.	Reflexes, knee and elbow muscular jerks.
Average good 75 p.c.	Average good 80 p.c.	All generally acute.	All; and muscle sense acute also.	Constant rotary 83 p.c. Slight rotary 6 p.c. Right 1 p.c. Left 1 p.c. None 3 p.c. Lateral 6 p.c.	Partially 68 p.c. Total 32 p.c.	About same as in females.	Inches. Average 28½ Average expansion, 2¼	Normal 85 p.c. Right 3 p.c. Left 6 p.c. Rolling 6 p.c. Gait normal 70 p.c. hesitating 30 p.c. Station normal.	Posterior lateral curvature 36 p.c.	Lungs normal 82 p.c. Fair 9 p.c. Poor 9 p.c Heart normal 66 p.c. arythmic 22 p.c. irritable 12 p.c.	Inches. Average circumference 21½ Negroid 1 Microcephalic 2 boys.	Teeth good 80 p.c. poor 20 p.c. Mouth normal except 1 drawn to right Tongue normal 80 p.c. protruding 20 p.c.	Good 82 p.c. Fair 9 p.c. Bad 9 p.c. No local atrophy recorded	Phth. dia 13 p.c. Phth type 8 p.c. Phthisinoid chest. 10 p.c. Rheum. 1 p c. Scrof. 6 p.c. Norm. 60 boys.	Nervous 73 p.c. Lymph. 14 p.c. Sang'n 3 p.c. Bilious 10 p.c.	Average age 4 years.	K. J. normal 36 p.c. quick 53 p.c. dimin. 8 p.c. absent 3 p.c. E. J. normal 81 p.c. quick 12 p.c. dimin. 7 p.c.

Females.

Average good 80 p.c.	Average good 75 p.c.	All generally acute.	All muscle sense acute.	Constant rotary 54 p.c. Slight rotary 43 p.c. Right eye 5 p.c. Left eye 1 p.c. None 2 p.c.	Partially 69 p.c. Total 31 p.c.	Op. neon. 19 p.c. Traum. 10 p.c. Cong. catar. 6 p.c. Scarlet fever 4 p.c. Congenital 45 p.c. Miscel. 16 p.c.	Inches. Average 26 expanded 2.1-3	Normal 69 p.c. Right 16 p.c. Left 11 p.c. Rolling 4 p.c. Gait normal 69 p.c. hesitating 31 p.c. Station normal.	Posterior lateral curvature 45 p.c.	Lungs normal 66 p.c. fair 20 p.c. poor 14 p c. Heart normal 40 p.c. arythmic 30 p.c. irritable 15 p.c. feeble 15 p.c.	Inches. Average circumference 20.8 Negroid 1 Microcephalic 1 girl.	Teeth normal. Mouth normal. Tongue normal. 70 p.c. protruding 30 p.c. Prognathous 1 girl.	Good 60 p.c. Fair 18 p.c. Bad 22 p.c. None local.	Phth. diath. 33 p.c. Phth. type 10 p.c. Rheum. 5 p.c. Scrof. 10 p.c. Normal 30 girls.	Nervous 66 p.c. Lymph. 22 p.c. Sang. 7.3 p.c. Bilious 4.7 p.c.	Average age 5 years.	K. J. Normal 40 p.c. Quick 45 p.c. Dimin. 10 p.c. Absent 5 p.c. E. J. Normal 62 p.c. Quick 30 p.c. Dimin. 7 p.c. Absent 1 p.c.

would be of scientific value. That there is in a measure a "deaf area," probably produced, as Dr. Oliver suggests, by the auditory impulses being situated in a position outside of the two auditory fields, is easily shown by snapping a spring in the different circumferences from without in, when an irregular field of audition is ascertained, much depending on shape of the head and pinna. The blind, or seeing, too, are often mistaken to locate such a sharp sound when made in the median line near the occiput or chin, the reference frequently being reversed.

Eyes. When we come to study the eyes in a general way as bearing upon certain peculiarities of movements and posture of the head, the effect on carriage and manner of progression, there is also a wide range of difference in the pupils of the school with different stages or degrees of affection of sight. One peculiarity that struck me very forcibly was the forward drooping of the head and of the lateral position of the head, depending upon the side at which rays were excluded from the retina or fovea.[1] In many such cases the scholars carried the head in walking toward the side of greatest obliteration of entrance of rays. This, of course, in the majority of such cases is probably due entirely to the attempt in obtaining a clearer picture of objects immediately in front of the person—i.e., in the direct line of walking. When such scholars were at rest the constrained position was very often relieved with the renewed confidence of repose. But when their attention was attracted anew, whether by ocular reflex or by other avenues of ingress in the reflex arc (as by hearing), the head would assume the position again, originally initiated by the ocular defect described above. For example, speaking suddenly to such a pupil, even when not in front of him, would frequently cause him to place the head to the acquired habit-position as when searching for vision, thus appearing as though he were deaf in one ear—a deception.

Extreme tilting[2] of the head to one side may in some cases be due to the interesting phenomena first suggested by Dr. S. Weir Mitchell, and at experimentation confirmed by Oliver, that rays entering the temporal side are more acutely perceived.

In those partially blind, where the scotoma from corneal disease was central, invariably the head was not held in any fixed position during progression, but was rather rolled about in the same effort to view and clear surrounding objects. We are thus apt to misjudge the mental capacity of a blind person when noting these movements alone, or expressions of countenance and grimaces, induced by efforts to see. Where the blindness has been, from the beginning, complete and sudden, and there is no irritation from the eyeballs or cornea, such movements are, as a rule, much more infrequent or limited. In taking an average of the cases we feel that total blindness produces in itself more concentration of the other senses, with a less waste of energy in the vain attempt to see, when the

1—This same phenomenon has been frequently noted by the writer in partially blind horses, and horsemen designate such animals as "stiff-necked."

2—Brain, 1895 (winter number).

vision is blurred beyond useful help in recognizing surroundings. Indeed, Mr. Allen tells me that many of these pupils, almost totally blinded, do not progress as rapidly in reading the "blind" relief-letters as do those in whom sight is an impossibility. In teaching at the school a screen is often placed betwen the reading card and the eyes, to prevent futile efforts at seeing; therefore, to concentrate the more that subtle, delicate sense of touch which is remarkably accentuated in the healthy congenitally blind (though our crude manner of testing with instruments does not demonstrate this); and in those acquired cases of blindness, otherwise normal, the touch-sense becomes notably improved beyond that of the seeing. We were struck with this phenomena developing in a boy[1] rather suddenly blinded from a traumatic central lesion, reported elsewhere. He had been extremely awkward in the tactile ability of the fingers; but now, after over three years' imperative training all his motions have become much more stable and the sense of touch highly developed. The tactile sense in the man, sixty-five years of age (a "runner" about the Institution), is very acute. This is the one recorded as congenital.

Muscle sense is better in the blind than in the seeing, and aids them much. Their sense of smell is also acute, often permitting the blind to distinguish individuals by olfaction alone. An exceptional instance, however, of this same acuity of the sense of smell in an intelligent physician of normal sight is known to the author. The sense of taste may become highly specialized, as in two blind people known to the writer outside of this analysis.

Nystagmus. This is a mooted point as to etiology and its significance in disease. Generally, aside from the ordinary causes, we have in the blind very frequently an abortive or nystagmoid motion, less constant in the irregular movements than the typical lateral rhythm described in the text-books. Dr. A. Thomson tells me this is due in many cases in large part to lack of fixation; the stimulus for muscle co-ordination is therefore wanting. Sometimes the irritable fundus, too, is the cause of such shifting, due to attempts to exclude the light rays. In simple optic atrophy and sequent total blindness most cases seem to have the lateral nystagmus more marked, even if the other irregular movements obtain. No doubt the more direct pull of the lateral recti muscles is the cause of this, due to improper control, just as in paralysis of a limb the flexor and stronger muscles cause contractures due to the same lack of inhibition.[2] The nystagmus in albinos is also a type of irregular motion due to photophobia from lack of the dark modifying pigment.

With the kind permission of Dr. George C. Harlan, Ophthalmologist to the Institution, we have been able to study his records of forty-three

1—"Potassium Iodide Therapeusis in Intracranial Disease." Philadelphia Polyclinic, June 15, 1895.

2—Since the reading of this paper Dr. Wm. Zentmayer has suggested to me the possibility, in some cases, of the nystagmus being in part due to nature's effort to include as many as can be of all the retinal rods and cones in all the fields of such disabled eyes.

girls (and forty-five boys). For the girls, of the remaining forty-two we have made this observation, with the following results, in toto, viz: forty-six girls, or 54 per cent., had a constant marked rotation of the eyeballs, of which nineteen were irregular lateral or nystagmoid; thirty-seven had a less marked, slight rotary movement, or in about 43 per cent. of the eighty-five girls. Of this number there were also five who had nystagmus in the right eye. One had it in the left eye only. In two girls (less than 3 per cent.) there was no nystagmus.

For the boys we also examined for this phenomenon in the remaining fifty, with the following result for all males (ninety): 83 per cent. had constant rotary nystagmus, 6 per cent. had slight rotary, 6 per cent. had lateral alone, 3 per cent. had no nystagmus. Of the males also 1 per cent had nystagmus in the right eye only, and an equal number had it in the left eye only.

This sign bore no relation to the degree of blindness; but it seemed that those with iritis, or where corneal disease had extended to the iris or ciliary body, the movement was of greater excursion and irregularity. Of those in which the disease was of the optic nerve or of central change, the lateral movement was more likely to be prominent. Dr. C. A. Veasey has made this clearer to me. It is also noted, as stated, that the head position referred to above in an attempt to see through some particular eccentric clear media probably tired the lateral muscles and constantly aggravated this condition.

Explanation of these different sorts of eye motions may depend on extent of peripheral irritation of the twigs of the third nerve supplying the stronger internal lateral muscles, as well as others. This is especially true where the third-nerve centre is involved alone, the other ocular nerves escaping. Were the sixth (abducent) nerve irritated or palsied alone, this phenomenon would also follow; same with the fourth (pathetic).

Pupillary reflex has bearing only on degrees of blindness, or intercurrent organic nervous disease. Dr. Harlan[1] found only three with no pupil response from stronger stimulus, even in total blindness and where the media were clear. Fifty-eight of the girls were partially and twenty-seven were totally blind. 68 per cent. of the boys were partially and 32 per cent. were totally blind.

I questioned a number of cases becoming blind after the fifth year by trauma or disease, and found the new condition had produced a greater sensitiveness and awkwardness than did blindness occurring in other pupils before about that year; or especially where, as noted above, the defect was congenital. An exception to this rule is in the case of a young colored man blinded late in life; he is bright and cheerful and in fine vigor, mentally and physically.

Idiopathic optic and other nerve-tissue degenerations obtain, no doubt, oftener than we can determine; but diathetic causes of blindness, of course, are the much more frequent. Both should be given full weight

1—University Medical Magazine, December, 1896.

before a stigma of degeneration is asusmed. One of the brightest boys in the school is G. H., one of the three cases of family type of hereditary blindness referred to under etiology. At the recent annual prize contest of the Friedlander Society at the Institution we awarded this intelligent boy of fourteen years of age the highest average for his junior recitation and for his excellence in reading of a senior composition; these over many pupils older than himself.

The philosophical bearing of a number of diathetic congenital cases (with undoubted specific blood taint) was notable; and their casual mention of other blindness in their families and ancestry was a reminder of the extent to which heredity can mould the mental state in this rarer class of blind persons.

Diathesis. Girls: There were twenty-eight cases (33 per cent.) of phthisical diathesis when chest-development was especially referred to. Of rheumatic, there were five girls, or about 5 per cent.; 10 per cent. were of tubercular type; nine girls among the younger children were scrofulous, as shown by broken-down glands or excess of lymphatic tissues in the nasopharynx (about 10 per cent.). Three cases showed well-marked signs of specific taint. This leaves less than half with no distinctive marks of disease-tendency; but it will be found that these girls are of less vitality than the seeing of corresponding ages. We propose using the circumference measurements of the chests at the different ages to compare with a series of the similar measurements in the seeing. This, with the weight and height, compared with the seeing, may be of some import for obtaining vital statistics. The use of the blowing machine gives fallacious records, for so much is dependent upon will-power here.

Boys: Among the boys, 13 per cent. were of phthisical diathesis, as especially shown in chest formation. Again 8 per cent. were of less chest-distinctive phthisical type; 10 per cent. were manifestly tuberculous, without active symptoms or actual lesions; over 1 per cent. (or one) were of rheumatic diathesis; and among the small boys 6 per cent. were scrofulous, several having scars of glands of neck in evidence. Withal, we found no case of Pott's disease or of hip disease among the number of both sexes.

Specific taint was noted distinctly marked in six boys; suspicious in as many others. The dormancy of predisposition to disease in these pupils is quite general, and must, no doubt, be due (in the class of hereditary cases just referred to) to progenitors' intermarriage with healthy stock.

Chorea had existed in half a dozen boys and girls. Many were what is best termed "fidgety." There were no cases of Bright's disease; none of cretinism, myxœdema, nor of visceral transposition.

Co-ordination. Station: Other than a slight sway in no particular direction (and excluding their common, peculiar habit of "swaying" when sitting or standing), this phenomenon could not be termed abnormal. There was no case of organic cord disease, and but one of muscle-dystrophy. Of the girls, thirty-eight stood still; forty-seven had the

habit-sway of the body or some other rhythmic motion, or of slight twitching of fingers. The same proportion obtained for the males. Imperative movements of trunk and hands existed to a marked degree in a boy and a girl, both cases of mental enfeeblement.

Gait. Girls : There was hesitation in twenty-seven, and in forty-six the gait seemed quite normal. In three cases the gait was distinctly halting and waddling, while one might be termed extremely awkward ; all the above bearing no relation to degree of blindness. All, too, were outside the bounds of pathologic gaits, which obtained in slight spastic form in two cases of mild cerebral palsy. In seven the amount of assurance in walking for almost totally blind girls (much more so for the boys) was remarkable. They seemed to know quickly from other cultivated senses, as by reflection of sound, their approach to an object, and scarcely ever were they injured. One girl was seen swinging under a porch in great glee with a closely measured precision, just permitting her head to escape the stairs behind.

The manner of getting about the school-yard of the boys, and their playing of games, surprises one many times. The less unnatural adeptness at the dinner-table shows well for the tri-daily training over good food. For breach of behavior we saw one boy, standing by a side table, calmly waiting his provision.

Boys : There was less trepidation among the boys as compared with the girls. Three were cerebro-spastic cases, which, of course, hampered progression, as did the muscle dystrophy.

Deformities : In thirty-eight girls (45 per cent.) there were postero-lateral curvatures of the spine in varying degrees, none enough to place them among orthopedic cases. This was due to asymmetry of the limbs in a few cases ; in the remaining, being probably caused by faulty position maintained in childhood before coming under gymnastic training. Stooped shoulders and carrying the head forward or laterally were the other habit-positions more commonly seen in both sexes, and which exercises are tending to dissipate.

There was one each of acromegalic, microcephalic, hydrocephalic males.

Of the boys thirty-four, or 36 per cent. less than in females, had noticeable abnormal curvatures of the spine. Greater freedom in thoracic expansion may account for this latter, as compared with the, as a rule, less active and more sedentary females. The use of the "Bobrick" adjustable desk of Dr. Hartwell, of Boston, is a help in preventing stooped shoulders, etc., the pupils of necessity being ill-graded as to ages.

It must be remembered, too, that physically and mentally greater or less differences are found from year to year between girls and boys of the Institution. Thus, one year may change much the number of weak or of strong proportionally ; hence our examinations are relative. Thus, in Mr. Allen's collection[1] of data (the comparison of weight, height and lung capacity of a composite of all the boys in the Institution at one time),

1—See Report for 1897, now in press.

it is found that, as compared with Dr. Sargent's anthropometric charts for normal persons of like ages and sex, taken from examinations of thousands of children attending the best private schools, the standing of the blind boys was 38 per cent. below the average, while that of the blind girls of the school was, in similar comparison with normal females, 25 per cent below the average. Fallacy could only come in here when we remember the lack of will-power, mentioned above ; also of the novelty of blowing into a cylinder which would intensify this instability existing in the blind. They certainly can be educated in this latter proportionately more rapidly than can the seeing, who will frequently make their best effort immediately after being shown what is expected.

Of the 150 pupils included in this average, only seven were above the average (50 per cent.). Examinations for next year may yield much different and bettering results, brought about by the efficient gymnasium work. Among the exercises given it is interesting to observe the accuracy with which a sudden turn is made at command, and how one pupil takes the place of another with exactness, no one being brushed against. Such training is a large factor in securing confidence and stability for the blind. Such, too, is the advantage of games skilfully guarded by teachers, as we observed in the kindergarten. Physical culture of the blind must, of necessity, carry out the ideal method—i.e., correlation of muscles and mind. They cannot imitate, and therefore act as mechanically so much —a notable feature in very young children and in cases of mental enfeeblement. Withal, the surprising excellence among blind classes, as compared with the seeing, is striking, and is proof of urgent gymnastic need of the former.

This contrast of observing classes of normal physiques and high intellection in gymnastics, in order to compare with the movements of the blind, was afforded the writer by Prof. G. H. Cliff, at the Philadelphia Girls' Normal School, where the first (in 1894) system of physical training in "common-sense" dress was established in Philadelphia. Here such training has enhanced the interest in teaching and health benefit for beginning teachers. Singularly, few physicians consider well, or, indeed, know of this wise provision of the Public Schools, overseen by capable teachers.

The pupils at the Institution for the blind have, following this, the proper dress and efficient instructors in physical education.

Reflexes and Sensory Status. There were no sensory changes recorded among the pupils.

Among the boys the knee-jerk was normal in 36 per cent., quick in 53 per cent., diminished in 8 per cent., absent in 3 per cent. (case of dystrophy). The elbow-jerks were normal in 81 per cent., quick and unaccounted for in 12 per cent., and diminished in 7 per cent. Muscle-jerks were seldom abnormal, although a "quick response" was the frequent note made. Skin-reflexes were also active. Among the girls 40 per cent. had normal knee-jerks, 45 per cent. a quick knee-jerk, 10 per cent diminished, and the knee-jerk was absent in five per cent., without lesion to ac-

count for. In them the elbow-jerk was normal in 63 per cent., quick in 30 per cent., diminished in 7 per cent., absent in 1 per cent.; the muscle-jerks being, as a rule, quick.

The sense of surprise may be the most potent cause of increased reflexes, as pointed out to me by Dr. Mitchell. Reaction-time in the blind, as shown by hearing-tests, is acute and active.

Heart. Males : Normal, 66 per cent.; arhythmic or intermittent, 22 per cent.; irritable, 12 per cent. No organic murmurs were found. Anemic bruits at the left base were noted in several.

Females : Normal, 40 per cent.; arhythmic, 30 per cent.; irritable, 15 per cent.; feeble, 15 per cent.; anemic murmurs were heard at left base, with a bruit in the veins of neck in six.

Lungs. Males : Nomal, 82 per cent.; average expansion in 9 per cent.; poor capacity or expansion, 9 per cent. There was no discoverable lung lesion. Several chronic (tubercular) pleurisies existed.

Females : Normal, 66 per cent.; average, 20 per cent.; poor chest capacity, 14 per cent. Incipient phthisis existed in two cases.

The surprise is that more heart or lung diseases did not exist among the 180 pupils.

Characteristics of the Blind. (Of 180 pupils of average intelligence.) The blind, as a class, seldom present that intense mental clearness of the seeing. As to peculiar traits of mind in the blind or no, we cannot, therefore, agree with the modern French school (at variance, however, with their pioneer, M. Diderot, whose classic "Essay on Blindness" (1773) is still authoritative, being reprinted in English so recently as 1895), that the "blind are but seeing-people in the dark"; for a person in perfect vision appreciates full well his coming liberation, whereas a blind person has no such outlook, and mental characteristics must diverge in peculiar lines among them. Thus, it is often said the blind have better memories, but this should be accepted with restrictions. They certainly do memorize well things and events not appreciated, supplemented, or assisted by that valuable ocular demonstration ; but they have not better general memories for events, as noted in the pupils at the Institution for the Blind, when compared with the seeing of like ages and station in life. In recording head or chest measurements in the dictation of a case study, it sometimes happened that the head or chest circumference, or other figures, were not recorded, and in such instances, no matter how remotely, the pupil would always be able to give the exact figues spoken, as proven by remensuration. Of course, we are excluding the hereditary cases of mental and physical weakness from this reckoning of mind-capacity.

One girl, blind since infancy, in perfect physical health and of average intelligence, could go about her father's farm with wonderful certainty. Another girl, becoming blinded late in life, had been extremely awkward after the injury that destroyed her sight. Again, the finer sensibility of the female shows itself in the mental depression and the acquired nervous temperament predominating in them as compared with the boys. In those having a natural hereditary tendency to music, among the girls at

least, cultivation of the Cecilian art will far more complement the loss of sight than in the non-musical. The plaintive tones of several of the girls at their annual concert last spring was favorably commented upon by competent critics. The musical development in the male under like circumstances seemed to be more mechanical. The therapeutic possibilities of music are great in any station of life, stimulating mind and body through increased metabolism. An excellent article on this subject appears in the "Journal of Mental Science" for November, 1897.

Temperament. The nervous temperament existed in 56 girls, or 66 per cent.; the lymphatic temperament in 19 girls, or 22 per cent.; the bilious temperament in 4 girls, or 4.7 per cent.; the sanguineous temperament in 6 girls, or 7.3 per cent.

In the whole number of girls the hereditary temperament was much modified by what may be termed an acquired, mild general nervousness. Among the boys the percentages were as follows: Nervous temperament, 73 per cent.; lymphatic temperament, 14 per cent.; sanguineous temperament, 3 per cent.; bilious temperament, 10 per cent. While the percentage of frank nervous temperament was higher among the males, yet the condition of general nervousness did not pervade so many. Lack of sensual control being more widespread, too, in the male, may account for increase of distinct neuroses among them.

Roentgen X-rays. Drs. Hilgartner[1] and Northrup conclude from the fact that "x-rays" are non-refractive (and from a series of experiments upon totally and partially blinded people either from optic atrophy or anterior disease) no aid can be given by this agent toward seeing.

An interesting example of stored-up perverted sight memories, etc., is exemplified in the instance of a man, aged over sixty years, Mr. Allen tells me of. He was blinded at twenty-one years of age. Letters were read to him ever after by a friend, and in his dreams they sometimes took the curious paradoxical form of his receiving a letter, seeing the address upon it and postmark, then handing the contents over to his friend to read aloud.

It is said that children losing their sight entirely before the sixth year never dream of seeing, the mental impression of light not being fixed until after that time. Edmund Parish, in his recent English edition on "Hallucinations and Illusions," states that the congenitally blind do not have visual hallucinations.

Sudden outbursts of laughter from less ludicrous causes than in the seeing is a noticeable characteristic of the blind children. But few are apt to be morose. Insanity seldom occurs.

In adults with congenital cataract operated upon to the partial restoration of sight, the fact that everything seems almost on a plane is interesting evidence of the absence of ocular demonstrative training that occurs in all of us from babyhood up.

Blood. A minority of the scholars appear pale, and on counting the

1—Texas Medical News.

blood of a half-dozen girls and boys that were most anemic-looking, we found the following :

	Red blood-corpuscles.	*Hemoglobin.* (*Fleischl.*)
Girls.		
J. B., pale, nervous,	3,443,333	80 per cent.
J. D., pale, choreic,	3,336,666	75 "
A. G., pale, dwarf (specific),	2,727,727	75 "
Average,	3,169,242	76.2-3 p. c.
Boys.		
W. C., pale, nervous, below par mentally,	3,075,000	74 per cent.
G. G., pale, great reader, sedentary, lymphatic,	4,000,000	80 "
C. W., nervous, bright	3,200,000	70 "
Average,	3,425,000	74.2-3 p. c.

Simple anemia is, therefore, to be expected in a certain proportion of the blind, due to inactivity and less vitality, as a rule, than in the seeing. Out-of-door life in the fresh air and sunshine should be encouraged, and the wearing of a shade or dark glasses enjoined where light-irritation is the cause of remaining indoors. The moving of the Institution to the country is, on this account also, a desideratum.

It is estimated that over a million people are blind ; and 50,000 of them were recorded in the United States Census for 1890. These, however, include senile blindness, in proportion of 80 per cent. to 20 per cent. among young persons. The reverse is almost true as to deafness. Of course the majority of these blind referred to are weaklings unable to attend school. When this is considered fully, and from the fact that many are educable children, the widespread utility and humanitarianism of schools for the blind are accentuated in their great civil return. State aid could not be to better purpose.

The great advantages of such Institutions are mainly threefold :

1. Segregation, producing concentration of work in those particular lines which the blind have, of necessity and training, accustomed themselves to do. This is noticeable among the laboring classes, especially at the Blind Men's Working Home, in West Philadelphia, where a really surprising amount of production is realized by such concentration. None the less is it manifest in study by means of text-books with the raised letters, which can be collected together in library form for use among the students of a school.

2. Similarity of their physical work creates new thoughts and is a strong mental stimulus to bring out the best efforts of the individual. Pushing the mental training of the blind to a high standard is, however, to be decried, for their nervous capacity is already limited and overwrought. The great advantage of the gymnasium of the Institution is also paramount here, as well as in the obtaining and preservation of physical health.

3. Restraints and self-restraints, wisely directed by capable instructors, is the third of a trio of requisites in the making of a brighter life for the blind.

My appreciation of the efficient and active aid in this work of Mr. E. E. Allen, principal of the school, and of the teachers ; also the kindly interest of Dr. Richard A. Cleemann, of the Board of Managers, is hereby acknowledged.

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REMOVAL OF THE CRYSTALLINE LENS FOR HIGH MYOPIA.

By Edward Jackson, A. M., M. D.,

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The removal of the crystalline lens for high myopia was proposed more than seventy-five years ago, and the suggestion was again put forward about the time that the work of Helmholtz and Donders called the attention of the medical profession to the importance of errors of refraction. But it did not meet with the approval of Donders, Graefe and others, and was not adopted. About ten years ago, Fukala again suggested it, and tried it, reporting several cases. It was quickly taken up

by other operators, especially in Germany, where high myopia is probably more common than anywhere else in the world. It gained numerous and enthusiastic advocates, who claimed for it an importance equal to that of extraction of cataract, and some operators have reported series of over one hundred cases each.

Any operation which, in favorable cases, produces such striking results is likely to become a fad among operators, and will be subject to abuse. Dislike of the French for anything German, and the natural conservatism of the English, have prevented the very rapid spread of such operations in those countries. But in America it is pretty sure to be taken up in the near future, and may be applied to improper cases. A popular understanding of the real limits of its usefulness will tend to check operative excesses.

The ideal case for the removal of the crystalline lens would be one in which such removal would exactly correct the existing myopia. It would be one in which, after the removal of the lens, the refraction of the cornea would be just sufficient to focus parallel rays on the retina. A cornea having the average curvature of 7.8 mm. focuses parallel rays at a distance of about 31 mm. Landolt, with the index of refraction that he accepts as the normal average, and a radius of curvature of the cornea of 7.829, gives the second focal distance of the eye, or distance of the principal focus behind the cornea, as 31.005 mm. This, then, would be the antero-posterior length of an eyeball that would have parallel rays focused on its retina by the cornea alone. Such an eye has myopia, requiring for its correction an 18 D. concave lens. Hence, we may expect that an eye having myopia of 18 D. will have its refraction made emmetropic by removal of the crystalline lens.

But it should be noticed that the above dimensions are only average dimensions. Sometimes the cornea has a greater curvature than has here been taken ; sometimes its curvature is less. Again, the myopia may be due to unusually great curvature of the crystalline lens ; so that, as a matter of fact, it has been found that removal of the lens sometimes corrects 25 or 30 D., or even more, of myopia. In other cases it may only correct 12 or 15 D. On this account it is impossible in any case to promise that this operation will entirely do away with the need of wearing glasses either for distant vision or for a certain near working point.

Even if removal of the lens did render the eye emmetropic, lenses would be required for near work, just as they are required by other emmetropic eyes after the accommodation has been lost. Of course, the removal of the crystalline lens removes all power of accommodation, whatever the patient's age. Then, again, removal of the crystalline lens is commonly done through an incision in the cornea, like that made for the extraction of cataract ; and any such incision in the cornea is likely to give rise to high astigmatism ; most cataract extractions are followed by astigmatism of 2 or 3 D. So that cylindrical lenses will be required for the correction of astigmatism in the majority of cases, even although all the myopia has been corrected by the operation.

Most operators who have extensively resorted to removal of the clear

lens have urged that the cases in which they did it were not capable of correction by concave lenses ; that the myopia was of such high degree that the patients could not wear correcting lenses. While this is doubtless true of a proportion of their cases, it is likely that some of them could have worn correcting lenses, if these had been accurately adjusted and carefully tried for a sufficient length of time.

Lenses for the correction of high myopia must not only be of the right strength, and combined with the right cylinder, for astigmatism is almost always present, but they must also be just the right distance in front of the eye, and properly placed with reference to the visual axis. This matter of the exact selection and proper mounting of lenses is not so well understood or carefully attended to abroad as it is in this country. Doubtless the fact that here a larger proportion of myopes are relieved by wearing spectacles, has caused the almost complete neglect of the operation in America up to the present time. Still, there are cases to which it is applicable, and it does offer certain advantages over the wearing of the very strong, heavy lenses necessary to correct high myopia.

The most important of these advantages is the increased size of the retinal image. The size of the retinal image is directly proportioned to the distance of the nodal point of the eye from the retina. In the average emmetropic eye the nodal point is 15 mm. in front of the retina. In an eye with 18 D. of myopia, if the myopia is due to lengthening of the eyeball, as it commonly is, the retina is over 23 mm. from the nodal point. The size of the image on the myopic retina, then, would be to the size of the image on the emmetropic retina nearly as 23 to 15; that is, it would be over fifty per cent. larger.

If, however, the myopia is corrected by placing a concave lens before the eye, this concave lens reduces the size of the retinal image. In the usual position for a spectacle glass it reduces the retinal image so that it is in the myopic eye just the same size as the retinal image of the emmetropic eye. But when myopia is corrected by removing the crystalline lens, no such reduction of retinal image takes place. It remains over fifty per cent. larger than the image in the emmetropic eye, and if the removal of the crystalline lens over-corrects the myopia, the convex lens that will be needed also helps to enlarge the retinal image.

Now, the vision of the myopic eye, especially with very high myopia, is nearly always defective from disease of the retina and choroid, or opacities in the vitreous humor, so that the myope needs the benefit of these large retinal images. It is by depriving him of this benefit that very strong concave lenses prove unsatisfactory to their wearers. Securing the larger retinal image of myopia by removing the crystalline lens will sometimes enable the myope to read, or use his eyes for some similar purpose, when with the diminished retinal image given by concave glasses he would be quite debarred from such use of them. This larger retinal image accounts for the very marked improvement in vision noticed in many cases after removal of the crystalline lens for myopia.

The number of cases to be benefited by removing the clear crystalline

lens is necessarily limited, and, as better care is taken to prevent myopia, it will become more limited. On the one hand, those who can see comfortably with correcting lenses do not require it. On the other hand, those who cannot be made to see much by the correction of their myopia cannot be materially benefited by it. But between these two exists the class to whom the operation will prove of very decided benefit.

As many of the patients who will seek relief from myopia in this way are comparatively young, we have to consider some form of operation to produce removal of the lens by absorption, or extraction. It has been stated that in myopic eyes the nucleus did not become hard even at sixty years of age. This statement is probably without much foundation in fact. Misapprehension may have arisen, because after a preparatory needling, such as has usually been practiced, no hard nucleus was found when the lens came to be extracted. But surgeons who have extracted unripe cataracts from myopic eyes know that these often do present a nucleus as firm as would be found at the same age in other conditions of refraction. And the so-called "choroidal cataract," dark in color, develops very slowly in eyes that have been the seat of chronic disease of the choroid, and which are very frequently myopic. It is characterized by a particularly large, hard nucleus.

The majority of operators who have written on the subject prefer the plan advocated by Fukala, of doing a preliminary discission, making free crucial incisions in the lens, and then, in a few days, extracting the resulting swollen opaque mass. They, however, report considerable reaction following the needle operation, which necessarily puts the eye in bad condition for the subsequent extraction ; and in most of their cases a much longer period has elapsed before good vision was obtainable than is usual after the extraction of cataract. The writer has seen three cases treated on this plan, including one of his own, and the reaction in all was severe. The same severe reaction has been observed after free needling of a full-sized, comparatively clear lens, for dislocation of the lens, or partial opacity.

The following method, therefore, appears altogether better. At the preliminary needling a small opening should be made in the anterior capsule. As much disturbance of the lens, particularly of the nucleus, is to be caused as is possible without increasing the capsular opening. If, after this, the reaction is but slight, the eye may be allowed to wait until the lens has become quite opaque, when it is to be extracted through a comparatively short linear incision in the cornea. In the case of a man aged twenty-four this was easily accomplished through the incision made by medium-sized keratome.

If, however, in spite of the small opening in the capsule, decided reaction occurs, and seems likely to increase in severity, it will be better to promptly extract as much as possible of the clear lens. Ordinarily, the removal of the whole lens cannot thus be accomplished. But the nucleus, and a considerable portion of the cortex, can be removed ; and if, by washing with the Lippincott syringe, the anterior chamber is left free of

lens-matter, the pain and hyperemia of the eye will rapidly subside. The cortex that remains, of course, becomes opaque, and for the time prevents vision. But it will ultimately be absorbed, or a clear pupil may be obtained by a subsequent needle-operation.

This plan will effect the removal of the clear lens with the greatest safety to the eye, except that in persons under twenty repeated needlings, first slight, later more extensive, might effect the same object. The older the patient, and the larger the lens, the smaller should be the first opening of the capsule, and the longer the time that may best be allowed to effect the opacity of the lens and its complete removal. Operating on but one eye at a time, the patient will be able to use the other during most of this period, only giving it complete rest when the operated eye shows distinct hyperemia.

Summary : Removal of the clear crystalline is to be considered only in cases of myopia in which the correcting lenses, necessarily very strong, cannot be comfortably worn.

It may be expected to correct about 18 D. of myopia, although the higher the myopia the greater the probable effect of the operation.

If fully successful, it will increase the size of the retinal images and the acuteness of vision more than fifty per cent.

It should be effected by beginning with discission through a small opening in the capsule, followed, except in very young patients, by extraction when the lens becomes opaque, or sooner if the reaction be severe.

MOUTH-BREATHING : SOME OF THE CAUSES AND RESULTS.

By Joseph S. Gibb, M. D.,
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Of so much importance are the nasal chambers that interference with their functions is productive of alterations and defects, not alone of the parts directly concerned, but also of other and more important organs.

The most important function of the nasal chamber is to prepare the inspired air for its ultimate destination, namely, into contact with the impure blood in the lung. The complicated, yet beautiful, arrangement of cavernous tissue in the turbinate bodies so regulates the heating power of the nasal chamber as to ensure an even temperature of the inspired air which reaches the ultimate vesicles, no matter what the temperature of the environment may be. This wonderful provision of nature prevents injury to the delicate mucous membrane of the vesicles which could scarcely fail to happen should they be frequently and suddenly exposed to great changes of temperature. While this wise provision excites admiration, it is no more remarkable than the power these same cavernous tissues have in eliminating large quantities of water, designed solely to

moisten the respired air. Warm, dry air could not be tolerated without injury to the mucous membrane of pharynx, larynx and bronchi. Hence Nature has provided in the nasal chamber an admirable apparatus to supply moisture. It has been estimated by careful experimentation that 7000 grams of fluid are thrown out by the nasal mucous membrane and taken up by the air breathed in each twenty-four hours. These two properties of the nasal mucous membrane, to wit : to warm and moisten the inspired air and render it fit to be received into the lungs, constitute the chief function of the nasal chamber.

Mouth-breathing, which of course infers absence of nasal breathing, abrogates these important functions and engenders conditions which may be conveniently studied under two headings, viz.: local and general.

In the early years of life the changes which occur locally as the result of long-continued mouth-breathing are far more serious than the acquired mouth-breathing of later years.

The presence of a high-arched, hard palate is so frequent a concomitant of long-standing cases of mouth-breathing in children as to constitute it an effect of this perverted and vicious habit. For some years past I have regarded these high-arched and dome-shaped palates as a very productive cause of septal deflections and spurs. The compression to which the soft tissues of the septum are subjected by the gradual encroachment of the hard palate causes it to yield in some part of its surface. This is, at least, a plausible explanation. It may not be the correct one. Clinical experience has taught me to associate deflections of the septum with well-marked cases of high-arched, hard palate, and the latter is a well-known result of pronounced mouth-breathing. In adult life, when the osseous tissues contain a large proportion of calcareous matter, and are hard and unyielding, palatal changes, such as described, are not possible. The most important local changes met with in adult life are those in the pharynx. Here the follicles which play so important a role in lubricating the pharyngeal wall, in consequence of the continuous influence of improperly prepared air, become perverted in their secretive powers and ultimately fail absolutely. The result is a dry, glazed condition of the pharyngeal wall, which is excessively unpleasant and is often the most serious complaint of the patient.

The peculiar and unpleasant alteration in the tone of the voice in mouth-breathers, commonly spoken of as a " nasal twang," is a result too common to need comment, but it is very disturbing to the patient. The last of the local effects to which we will direct attention is the effect on sleep. Mouth-breathing induces noisy and disturbed sleep, alike unrefreshing to the sufferer and annoying to those unfortunate enough to be in close proximity. This condition is especially annoying in children, in whom there is frequently an accumulation of mucus in the post-nasal space, which adds to and intensifies the obstructed respiration.

Attention will be directed to a few of the general effects of mouth-breathing. This list is a formidable one, being as numerous as there are observers. I will have nothing to say of such dire effects as idiocy, spinal

and chest deformities, and a host of other horrible conditions which have been portrayed as the result of mouth-breathing, but will confine myself strictly to that which clinical experience has taught.

The most important general effect is that upon nutrition. The tissues of the body, to be normal, must be supplied with pure oxygenated blood.

In mouth-breathers the lungs and the impure blood therein contained are furnished with air imperfectly heated and moistened, and, therefore, deficient in oxygenating power. As a result, the tissues which this blood supplies receive an imperfect nutritive material, and naturally must suffer. Clinical experience, however, sometimes seems to refute this theory, for occasionally we see instances of mouth-breathing in the most vigorous and healthy-looking children. These exceptions, however, do not disprove the rule, as there may be circumstances about an individual case which would tend to explain the reasons for the apparent exception.

Evidence of imperfect nutrition is indicated not alone by loss of body weight, anemia, etc., but is shown by less marked conditions. The unusual susceptibility to catarrhal attacks, adenoid and glandular hypertrophies all point to nutritive changes.

The next general effect in importance, and this, indeed, might with propriety be placed among the local effects, is the preternatural susceptibility of the mucous membranes.

The supply of imperfectly prepared air to the delicate mucous membrane of the respiratory tract engenders a passive congestion of this tissue and causes an unusual susceptibility to changes of temperature. This congestion, coupled with the nutritive changes in these tissues already referred to, renders these individuals peculiarly susceptible to catarrhal attacks.

Much more might be said of the general effects of the pernicious habit of mouth-breathing, but as the object of these remarks is to point out a few of the more prominent causes and effects, and to endeavor to illustrate them with cases from personal experience, I will now pass on to the causes.

The causes of mouth-breathing are numerous. Any obstruction in the nasal chambers, naso-pharynx or pharynx, necessitates mouth-breathing. In early life by far the most frequent cause is hypertrophy of the adenoid tissue at the vault of the pharynx. Less frequently enormously hypertrophied faucial tonsils will induce mouth-breathing, and still less frequently hypertrophies of the turbinate may be cited as a cause, though instances of each of these etiological factors have come to my notice. Among the extraordinary causes in childhood may be mentioned stenosis of nares from cicatricial contraction, foreign bodies and deflections of the septum. An unusual cause of mouth-breathing was brought to my notice a short time since. The symptoms of mouth-breathing developed very gradually, but became so pronounced as to cause serious discomfort to the little patient and great alarm to the parents. A boy of about six years of age, for a period of six months or more, had been giving evidence of difficulty in nasal respiration. This difficulty reached

such a stage that when he applied for relief nasal respiration was absolutely nil. There was no history of traumatism. Examination revealed a bilateral swelling of the septum, entirely filling up both nares. This swelling was found to fluctuate. An incision into the most prominent part of the swelling in one naris liberated a large quantity of thin, curdy pus, and immediately both swellings collapsed. Recovery was complete after a few weeks' treatment.

Here was a case in which the chief, and indeed the only symptom, was difficulty of nasal respiration, or mouth-breathing, the cause of which was an abscess of the septum.

The causes of mouth-breathing in adults are different from those of childhood. In the latter by far the larger number are congenital or develop shortly after birth.

In adults the nasal or naso-pharyngeal obstruction is the result of a growth or a malposition of the structures. Hypertrophies are rarely so pronounced as to cause absolute stenosis. Nor do the ordinary forms of polyps often give rise to complete obstruction. Of the neoplasms which occur in this locality those most likely to assume such proportions as to cause complete obstruction are the fibrous or myxo-fibromatous growths which commonly spring from a spot in the naso-pharynx, or on the edges of the posterior nares.

I have seen quite a number of these growths, and in each case the chief source of annoyance to the patient was difficulty or impossibility of breathing through the nose.

The history of the case which follows illustrates this type : Miss A. B., aet. 25, a dressmaker. For more than five years she had had difficulty in nasal respiration, and for the past three years she was totally unable to breathe through the nose. She was miserable in consequence of disturbed sleep and dryness of the throat. Two years before she was first seen some growth, said to be polypoid, was removed from the nose with no relief to the symptoms of obstruction. When first seen the symptoms were as follows : The voice was distinctly and unpleasantly nasal in tone. Examination of the nasal chambers revealed the presence of a number of polypoid masses springing from the middle turbinate body and extending into the meatus.

Rhinoscopic examination revealed the presence of a large growth filling the entire naso-pharyngeal space. After much difficulty this growth was removed, and all symptoms of nasal obstruction were relieved. The effect of the removal upon the general health of the patient was most happy. She had become despondent and irritable. Unrefreshing sleep and the constant annoyance of a dry and sore throat had made her anemic and of poor tone.

She rapidly gained in flesh and color after the removal, and all unpleasant symptoms passed away.

Growths of a malignant nature, such as sarcoma, sometimes fill the nasal chambers and cause complete obstruction to nasal breathing. Of course this symptom is not often the only one present, but at times it may be the one for which the patient seeks relief. I have such a case under suspicion at the present time. The history is as follows: M. H., age 51, married, for more than a year has had great difficulty in breathing through the nose, and has frequent attacks of severe epistaxis. Her sleep is much disturbed in consequence of mouth-breathing. Examination revealed both nasal chambers to be absolutely packed with a growth, the microscopic nature of which is still in doubt. A portion was removed, and is now in the microscopist's hands for examination. From the character of the growth, and its excessive vascularity, there is slight doubt of its malignancy.

These two forms of growth illustrated by the cases are rare forms of nasal obstruction, but should not be lost sight of in searching for a cause of mouth-breathing.

Septal deflections are seldom so marked as absolutely to cut off all nasal respiration. In sigmoid deflections, in which both nasal chambers are encroached upon, or in crushes, where the septum is bent upon itself, and osseous or cartilaginous masses form and increase the obstruction, we meet with absolute obstruction to nasal breathing. A case was operated upon recently at the Episcopal Hospital which well illustrates this deformity. The patient sought relief solely for the mouth-breathing, which caused him to sleep with his mouth open, thus giving rise to dryness and soreness of the throat, and rendering sleep restless and unrefreshing, besides disturbing all in his immediate vicinity. He had no knowledge of anything wrong in the nasal chambers.

Examination showed both nasal chambers entirely occluded by a sigmoid deflection. A large, bony spur was removed from the left nasal chamber, and he was given the first draught of air through the nasal chambers he had had for years. The relief to all unpleasant symptoms was both marked and gratifying.

Mouth-breathing is an unnatural condition which is not the result of habit, as has been erroneously believed, but always has a cause. An effort has been made in this paper to point out a few of the rather unusual causes. The ordinary ones are too well known to require comment. Each case should be diligently and carefully studied to determine the cause, and in the majority of instances a definite lesion will be discovered.

It is only by determining the exact causation that we can hope to be successful in relieving this distressing and pernicious defect.

REVIEW OF MEDICINE.

MEDICINE.

Some Factors in the Etiology of Hepatic Cirrhosis. ("Albany Medical Annals," January, 1898.) By George Blumer.

The etiology of cirrhosis of the liver is still in a condition of sufficient uncertainty to render an occasional review of the literature of this subject worth while. It is the object of this review to note the trend of thought in the available literature bearing on (1) the relation of alcohol to cirrhosis, and (2) the relation of infections to cirrhosis.

The Relation of Alcohol to Cirrhosis.—In his thesis of 1897, Saingery, writing on the etiology of alcoholic cirrhosis, recognizes three kinds of alcoholic beverages which may be related to the disease. These are wine, alcoholic liquors (whiskey, gin, etc.), and essential liquors, as cordials, liqueurs and the like. He attempts in his work to settle the question as to whether all three forms are capable of producing cirrhotic changes, and produces the following figures to form a basis for his conclusions. Clinical observations give the following facts: In three hundred and twenty-eight individuals using only alcoholic and essential liquors to excess, without the least excess of wine, there was no cirrhosis. In sixty-eight individuals who abused wine, but not other forms of drink, cirrhosis was always present in some degree. An inquiry into the history of one hundred and forty-four cirrhotic drinkers elicited the fact that all had abused wine, and sixty-eight of them nothing but wine. From this the author concludes that the drinkers of alcoholic and essential liquors do not become cirrhotic, and that therefore the cirrhosis of wine drinkers is not due to the alcohol itself. Pathologic observations showed that in thirty-nine autopsies on individuals who had used alcohol or essential liquors to excess, fatty liver was present. Those individuals who showed both cirrhosis and fatty liver at autopsy were all wine drinkers, but besides drank alcohol and essential liquors. The author concludes that wine produces cirrhosis and alcohol steatosis. The minimum dosage said to be necessary to produce cirrhosis from wine was from two to three liters daily, over a period of from eight to ten years. This much is necessary, but does not always produce cirrhosis. The author states that some brands of wine are more apt to produce cirrhosis than others, and asks as a final question what substance it is in the wine that causes the cirrhotic changes. The discussion before the French Academy of Medicine, in which Dr. Lancereaux is taking a prominent part, practically takes up the subject where Saingery leaves it. Lancereaux goes over the same ground as Saingery, and comes to the same conclusions, but goes a step further, and states that the cirrhosis of wine drinkers is dependent on the process of plastering, by which certain chemical

agents of a noxious character are added to the beverage. He claims that it is the salts of potash contained in this plastered wine which cause the cirrhotic changes, and further claims that he was able to artificially produce cirrhosis in animals by causing them to eat food mixed with these salts. In from six to eighteen months all of the animals so treated showed more or less cirrhosis of the liver. In the discussions following Lancereaux's papers he was strongly opposed by many of his colleagues. Various objections were brought against his contention, the main ones being the fact that cirrhosis occurred in non-wine-drinking countries, and the fact that it was very difficult in wine-drinking countries to find individuals who confined their attentions to wine. The question raised by Saingery and Lancereaux would seem to be still sub judice, but it is certainly worth looking into carefully. In connection with the relation of alcohol to cirrhosis, it may be added that from an experimental standpoint the production of cirrhosis by the administration of pure alcohol has been singularly unsuccessful. Lafitte, Strassman and Affanassief were all unable after months of experimentation to produce cirrhotic changes. Von Kahlden found only parenchymatous changes, and those mostly in the form of fatty degeneration. Straus and Blocq claim to have been able in some instances to produce the lesion.

The Relation of Infectious Diseases to Cirrhosis.—The evidence in favor of an infectious cirrhosis is both of a clinical and experimental nature. Cirrhosis of this character can perhaps be best observed in children, providing that hereditary syphilis can be excluded, as in children the alcoholic factor can usually be definitely excluded. The peculiar form of cirrhosis occurring in the Brahmin caste in the East Indies would seem to be a good example of infectious cirrhosis, according to the description of Gibbons, Chose, and Mackenzie. This form is always associated with gastro-intestinal disturbances; it occurs in children usually under one year of age, and seldom after three years, in whom syphilis can be excluded. According to most of its observers, it is due to the gastro-intestinal disturbances, and presumably associated with the absorption of toxic substances from the gastro-intestinal tract. It usually occurs among the children of the rich, who are fed at this time of life mostly on vegetables and sweets. Gibbons has seen fourteen children in one family die of the disease in succession. In connection with this class of cases the experiments of Krawkow are of great interest and importance. This author, by introducing into the alimentary canal of fowls different micro-organisms, was able in some instances to produce marked cirrhotic changes in the liver. The bacteria which seemed most frequently to produce these changes were the bacillus pyocyaneus and the staphylococcus pyogenes aureus. Other authors have succeeded in producing an experimental cirrhosis by infecting the organism in general, or else the portal system or the biliary passages, either with bacteria or with their toxines. Scagliosi produced cirrhosis in fowls by injecting cultures of anthrax, prodigiosus and subtilis into the blood, and concludes from his observations that infection played a much more important role than alcohol in the production of the disease. Roger obtained

thromboses, hyaline degeneration and cirrhosis in the liver by infecting animals with his bacillus septicus putridus. Flexner observed cirrhosis in some instances after the continued injection of the blood serum of one animal into another. Gilbert and Dominici were able to produce cirrhotic lesions by an experimental infection of the biliary passages with various micro-organisms. Charrin was able to produce a cirrhotic process in the rabbit by injecting the toxines of bacillus pyocyaneus into the portal vein.

In all these cases changes in the cells were noted, as well as in the interstitial tissue, and most of the authors were inclined to believe that the cellular changes were the primary ones. In human pathology, within the last few years, there have been numerous cases reported in which changes in the liver cells similar to those experimentally produced have been noticed, and presumably such changes can be followed by cirrhotic processes. Thus in typhoid fever Reed found areas of necrosis throughout the liver-substance, and in one case, where the individual had had the disease some years previously, was able to demonstrate new connective tissue formation. Le Count and others have seen similar changes in the liver in tuberculosis; Flexner has observed them in various septicemias, and Barker has recorded a case of malaria in which they were present.

The supposition that cases of cirrhosis may result from such lesions, while resting in some instances on good grounds, requires further study both clinically and pathologically, and a closer attention to the relation of cirrhosis to infectious processes in general will doubtless render the etiology much clearer.

Retroesophageal Abscess. ("University Medical Magazine," January, 1898.) By J. P. Crozer Griffith.

The author reports a new case in a child, and analyzes most of the cases previously reported. He says that it is not necessary to dwell at any length upon the symptoms. In fact, there seem to be none which are absolutely characteristic, and the diagnosis of the disease is often difficult and many times impossible. If we analyze the details of the cases mentioned, as far as they are given by the writers, including Griffith's case, we find dyspnea present to some extent in nearly all, and in most of them constituting a prominent and very urgent symptom. This would seem to be the result of reflex irritation as much as, or more than, of direct stenosis. Cough also was nearly always present, sometimes only slight, sometimes very brassy and suggesting laryngeal stenosis, or, as in my case, pressure lower upon the respiratory tract. The voice was seldom affected in the cases collected,—viz., in only two cases, and in these but slightly. This is in sharp distinction to the voice of retropharyngeal abscess, which is so often thick and nasal. So, too, there was a peculiar absence of dysphagia, in spite of the fact that the position of the abscesses must necessarily have produced pressure upon the esophagus. This is doubtless due to the fact that the tube yields

easily to this pressure and changes its position. In retropharyngeal abscess, on the other hand, dysphagia is a very prominent symptom. In only two of the cases of retroesophageal abscess was dysphagia present, and in one of these the abscess had really extended into the pharynx as well, while in the other the difficulty in swallowing did not develop until the abscess ruptured into the esophagus, and then was but a temporary symptom. Swelling in the neck would be a valuable symptom, but it is mentioned in only three cases. Curvature of the upper dorsal or lower cervical spine would render one suspicious of the presence of an abscess; but that, of course, is a symptom which may or may not occur, depending upon the degree of caries, if this exists. As to the presence of caries as a cause, it is mentioned in seven cases, and proved by autopsy to have been absent in two, while in the case of Walsham, which recovered, there was no sign of it, and in Bremner's case nothing is said on the subject. Baginski states that in most of the five cases which he speaks of the cause was diphtheritic pharyngitis. We may infer that the cases of Gibney and of Knight, to which Ripley refers, were the result of caries. It is interesting to note that the disease seems to be preeminently one of infancy and early childhood. There are only two of those enumerated here which occurred in adults.

Angina Pectoris: Its Relation to Dilatation of the Heart. ("Transactions of the Association of American Physicians," 1897.) By J. H. Musser, M. D.

The purport of this paper is the consideration of angina pectoris, insomuch as it bears relationship to dilatation of the heart. It includes an estimate of the influence of this relationship in the prognosis and treatment of the subjective symptoms (pain) on the one hand, and of organic condition (dilatation) on the other. The paper is entirely clinical, and is a record of the writer's observations, not of angina pectoris, but of such of his cases of this affection which manifestly exhibited the relationship above mentioned.

The presence of the symptom-complex, so skilfully portrayed by the earliest historians of this affection, Heberden and Jenner, and more fully elaborated by Latham and Gardiner, is essential to the formation of a diagnosis, although he agrees with the dictum of the latest author, Professor Osler, that "pain about the heart of an agonizing character, occurring in paroxysms, is the dominant feature." In angina pectoris we are confronted with the facts that it usually occurs in males, that it is an affection of the latter decade of life, that the patients are of the better class, usually well fed, and that they are often the victims of other affections (gout, diabetes, etc.), indicating a more or less sedentary life with an abundance of food, which contributed to the physiological hypertrophy that proceeds with advancing years.

Musser states that we can reasonably infer the presence of dilatation of the heart by the physical signs of displaced apex-beat, gallop-rhythm, a soft regurgitant murmur in the tricupsid or mitral area, by venous phe-

nomena, and by the congestions, cyanosis, and dropsy that atend this affection. The results of cardiac percussion may be confirmatory, but are not looked upon as essential in the diagnosis of cardiac dilatation.

Bearing in mind these fundamental propositions, the writer submits cases to illustrate the following points:

1. When dilatation of the heart supervenes in a patient the subject of an attack or attacks of angina pectoris, the subjective symptoms may subside. At the same time the physical type of the individual changes.

2. Angina pectoris may occur in a patient who has had dilatation of the heart, after the organic condition (dilatation) is removed by treatment.

3. True angina, when it occurs in dilatation of the heart, admits of a prognosis more favorable than when it occurs with other mural conditions, as myocarditis, etc., without dilatation.

4. Grave cases of dilatation of the heart, conversely to the above, may be looked upon as amenable to successful treatment if the patient should have paroxysms of true angina pectoris.

5. In the treatment of angina pectoris digitalis is of doubtful value, not to be given unlesss there is an excess of dilatation.

6. The pain of angina appears to be due to increased contraventricular pressure, although other causes are no doubt operative.

In speaking of the prognosis in angina pectoris, he says: I. The onset of symptoms and signs of dilatation in angina pectoris render it safe to predict the highly probable relief to the anginal symptoms. II. At the same time we can also predict that the type of the individual will change, and that the onset of the cardiac condition is the beginning of senility; that henceforth business cares, etc., must be set aside and that a life of ease must be led, if the years of life are to be added to. III. Angina pectoris in the course of dilatation of the heart admits two favorable elements in the prognosis: (a), death will not take place from angina in the large number of cases; (b), the dilatation will in most cases be restored.

A Case of Echinococcus Cysts, Involving the Heart Muscle and Lungs. ("Deutsche mil.-ärztl. Zeitsch.," 1897, No. 10.) By Klehmet.

An under officer, 27 years of age, for some time had been suffering from a disease of the respiratory system, so indefinite in its nature that it was first thought to be a bilateral pleurisy, then a pneumonia, afterward pneumo-thorax, and lastly a pericarditis. He lingered for several months and finally died of what was thought to be edema of the lungs. An autopsy was made, and upon opening the chest it appeared, at first glance, that the heart was greatly enlarged, especially on the right side; but upon closer inspection, the dilatation was found to be caused by a cyst in the wall of the right ventricle, which contained about 150 smaller cysts, ranging in size from a hemp seed to that of a hazelnut. This cyst had bulged out the pericardium, which was much thickened, and it had also perforated the wall of the right ventricle in two places; in the ventricle and fat surrounding it were about twenty small cysts. The left

lung was in a state of atelectasis on account of the numerous cysts, and in the lower part of the left chest, extending to the diaphragm and over to the pericardium, was a large cavity, having a very tough capsule filled with thin yellow pus.

A large number of cysts were also found in the right lung. The liver however, was free.

The author states that no doubt the primary seat of the echinococcus was in the heart where it multiplied and enlarged until it ruptured into the right ventricle, when it was then carried by the pulmonary arteries to the lungs.

NEWCOMET.

THERAPEUTICS.

The Effects of Lemon Juice on the Constituents of Urine. ("Med. Monatschrift," N. Y.) By Dr. Karl Dauber, Würzburg.

The author wishes to determine the real worth of citric acid, which when taken in the form of lemon juice has for a long time been a popular remedy for rheumatism; although Von Noorden and Haussmann, in their experiments, did not find that it brought about any radical change in the constituents of gouty products eliminated by the urine. He mentioned a man who during an attack of gout drank in one day the juice of 48 lemons and continued to take the juice of 2 or 3 a day for three years. It evidently did influence the course of the disease in this case. For his experiments he used the above-mentioned man and two others; one a patient who suffered from epilepsy (of use only when free from attacks), the other a patient with mild emphysema. The specific gravity, acidity, total nitrogen, uric acid, urea, xanthin products, and phosphoric acid were estimated in all the experiments. The nitrogen was estimated by Kjeldahl method, uric acid by Gorrland-Hopkins method, urea by Mörner and Sjöquist, the xanthin products by a modification of Salkowski's method, phosphoric acid and salts by Freund's method, the acidity by one-tenth normal soda solution and phenolphtalein as indicator. The diet and amount of liquid were the same in each experiment and were previously analyzed.

He did not attempt to follow the citric acid through the system, but refers to the findings of others. His conclusions were as follows:

1. That the elimination of nitrogenous elements of urine does not appear to be affected very much by large or small doses of lemon juice.

2. That the elimination of nitrogen as urea seems to be increased even if the total nitrogen is not.

3. The elimination of uric acid was not appreciably increased. In his own experiments it was about one-third less.

4. The elimination of xanthin products diminished, but more investigation is needed upon this point.

5. The elimination of phosphoric acid was increased in all his experi-

ments. About one-quarter was in the mono-sodic phosphates, while the di-sodic phosphates were diminished.

6. Urination did not seem to be perceptibly changed.

7. The action seemed to be freer just after the administration and was increased by the size of the dose.

NEWCOMET.

The Nature and Manner of Action of Atropine on the Motor-Activity of the Intestine in Connection with Its Use in the Treatment of Chronic Constipation and Saturnine Colic. With a Contribution on the Mechanism of the Dysperistalsis Produced by Pilocarpine. ("Il Policlinico," Nov. 15, 1897.) By Prof. Gaetano Nairica.

One party of investigators contend that atropia decreases or arrests intestinal movements, while another group believes that it accelerates; still others state that peristalsic movements are first stimulated, and then paralyzed. Some ascribe its action to direct muscular stimulation, others to action upon the splanchnics or upon the peripheral nerves. The author had introduced T-shaped tubes into dog's intestines, the tubes holding on each end contained in the bowel, rubber bulbs. The contractions of the intestines were registered by means of the variations in air-pressure produced by compression of the bulbs by the intestine and the consequent vibration of a membrane stretched over the projecting arm of the tube. Small doses (1-1300 to 1-130 grain) produced no appreciable effect, and after doses of 1-22 to 1-33 grain they ceased entirely. This occurred even when dysperistalsis had been produced by pilocarpin, and further injections of the latter did not arouse peristalsis again.

The action of the atropia is, he considers, on the intestinal ganglia and the terminal nerves. Pilocarpin he found had directly the opposite effect upon peristalsis, and by directly the opposite action—i.e., excitation of the ganglia and terminal nerves. He states that there are no strictly exact observations upon the clinical effects of atropia in ordinary constipation, and that from these experimental results it seems that it is not indicated in constipation due to atony of the bowel. In lead colic and in other conditions where constipation exists with excessive irritability of the bowel the drug is indicated and relieves by combating the muscular spasm.

EDSALL.

SURGERY.

Extra Peritoneal Rupture of the Bladder, Complicated by Fracture of the Pelvis. Report of a Recently Cured Case, with a Study of Ninety Cases Collected from Literature. ("Annals of Surgery," February, 1898.) By James E. Mitchell, M. D.

The patient described in the above article was admitted to the Johns Hopkins Hospital for injuries received by the passage of a wagon over the hips and abdomen. In addition to signs of contusion there was a condition of mental stupor. The diagnosis of rupture of the bladder was

made by the withdrawal of bloody urine, and the injection of an estimated amount of boric acid solution with the subsequent withdrawal of a decreased amount. Supra-pubic incision revealed a fracture of the ramus of the left pubes and a perforation of the bladder immediately behind it with considerable extravasation of urine. The wound in the bladder was entirely extra-peritoneal, and was immediately closed and the central incision and two additional lateral incisions which were made for drainage were packed with bismuth gauze. The mental hebetude soon disappeared, but the subsequent course of the case was complicated by the formation of a supra-pubic fistula, with prolonged fever and occasional chills. The patient was accordingly immersed in a bath of a temperature of 100° F. almost continuously for forty days, and eventually recovered. Mitchell analyses ninety similar cases of extra-peritoneal rupture of the bladder with fracture of the pelvis. He finds the accident to be most common in men between the ages of twenty and sixty. The cause is traumatism, especially the passage of wheels over the body.

The mechanism of rupture may be by a continuance of the fracturing force, direct penetration by fragments of bone, concussion acting on a full bladder, and tearing of an empty viscus by a separation of the anterior ligaments connecting it with the pelvis (Allis). In 63 per cent. of cases the opening was in the anterior wall communicating with the space of Retzius.

The symptoms are those of fracture of the pelvis with mental hebetude, pain in the hypogastrium, a desire to micturate, with the passage of a small quantity of blood, bloody urine, or nothing at all, and collapse and coma. There may be signs of general peritonitis, and locally there may be tumefaction or dullness on percussion. Cauterization generally yields but little urine, which is often bloody, and the injection of a known quantity of a non-poisonous antiseptic solution and its subsequent withdrawal and measurement is the crucial test. The mortality has not been much reduced of late, being 70.8 per cent. for the last fifteen years. Death is due to shock, peritonitis and septicemia.

The proper treatment is supra-pubic incision, suture of the torn viscus, and drainage, with perhaps wiring of the pelvic fragments. The continuous warm bath, the use of which is mentioned in connection with several other cases, is recommended as a method of preventing absorption from the urine-soaked tisues, and as a valuable adjuvant in securing free drainage. The comfort of the patient is apparently much increased thereby.

JOPSON.

On the Use of the Gigli Wire Saw to Obtain Access to the Brain. ("Philadelphia Medical Journal," January, 1898.) By W. W. Keen, M. D., L. L. D.

The author summarizes the advantages of the Gigli saw as follows:

First.—In sawing the three sides of the osteoplastic flap, he was able at will to bevel the edge in such a way that when the flap was replaced it would not sink into the cavity of the skull and press on the brain, even

though along the middle line he was obliged to gnaw away the bone at each end. By leaving 1 cm. of the beveled surface in the middle, or indeed at any point, the bone is supported perfectly well. There is practically no loss of bony tissue, as the saw is so thin.

Second.—Another advantage is that when he had completely sawed through three sides of the quadrilateral osteoplastic flap which he wished to turn down, the skull being very thick, it would have been somewhat difficult to break the bone along the fourth side and the edges of the bone would have been very irregular and with short spicules attached. These, if care was not taken, might prove a source of trouble to the dura when the bone was replaced. By passing the Gigli saw under the inner surface through the two openings, he was able at the base to saw half through the thickness of the skull from the inside and then break the outer table with but little exertion and a quite regular fracture.

Third.—The saw avoids the jarring of the skull caused by the hammer when the chisel is used. This is a theoretic rather than a practical advantage. He has used the chisel in a good many cases now, and has never seen any case of injury from concussion of the hammer.

When one of the Gigli saws has been used it curls up and is useless. Besides this, the roughened points have been so worn away that if the skull were very thick it would probably require a second saw. One of the saws broke when he had been using it some little time, but all that was necessary was to withdraw the broken ends and use a new saw.

Keen was somewhat anxious on the long side of his quadrilateral lest as the saw made the chord of an arc, the arc being the curved under surface of the skull, the saw might cut into, or otherwise injure, the dura mater. He was much gratified when the flap was turned down to see that not the slightest injury had been inflicted upon the dura.

Treatment of Acute Prolapsus Ani. ("British Medical Journal," Dec. 11, 1897.) By Frank Elvy, M. R. C. S. Eng., L. R. C. P., Lond.

Acute prolapsus ani occurs frequently at childbirth, but as the patient has to keep her bed irrespectively of the anal trouble the condition does not assume so much importance as when the sufferer is an active man of business to whom the time and rest necessary for recovery are serious matters. A succession of these acute cases in many respects similar led Elvy to adopt a treatment which has given encouraging results. The pathology of the condition appears to be a slipping or forcing down of the mucous membrane investing the sphincter and of the mucous membrane immediately above it. Spasm of the sphincters, impeding venous return, and edema result in the formation of an elastic and exceedingly tender, livid or purple swelling occupying either a portion or the whole of the circumference of the anal aperture. The swelling can be returned above the sphincter without much difficulty by the finger, but in the course of a few minutes in many cases the prolapsus has recurred. The application of heat or of cold in the form of an ice compress relieves the

discomfort, but does not effect a cure or materially alter the size of the swelling. Astringents, either in the form of an ointment or of suppositories, Elvy has found to be useless. Regulation of the bowels and the recumbent position are necessary, but a week often passes before nature brings about recovery.

It is obvious that if the prolapsus could be kept up for a few hours a speedy cure might be anticipated, and this led Elvy to employ pads and a T bandage, but it was almost impossible to prevent the descent of a small swelling in this way, owing to the awkward situation in the hollow of the buttocks. Under these circumstances, and in the absence of thrombosis, which would call for incision, he has successfully used as a pessary a full-sized Tait's cervical dilator. After replacing the prolapsus with the finger the vulcanite uterine dilator is lubricated and inserted for one inch up the rectum and is retained in position by a collar of dentists' wax (Stent's composition), supported by cotton wool and a firmly applied T bandage. The pessary not only prevents a descent of the swelling while in position, but by its pressure it favors absorption of the edema, and it empties the engorged veins ; it should be inserted at night and retained until the following morning. This treatment he has found to bring about a complete cure. There has been no tendency to relapse, and the patent has been able to rise and resume his occupation without discomfort. Olive-shaped pewter pessaries have been used for this purpose, but they are dependent for their position and retention upon the action of the sphincters, which cannot be relied upon in these cases. In the chronic condition of prolapsus ani, arising from atony of the levator and sphincter ani muscles, much benefit cannot be expected from treatment by pessary.

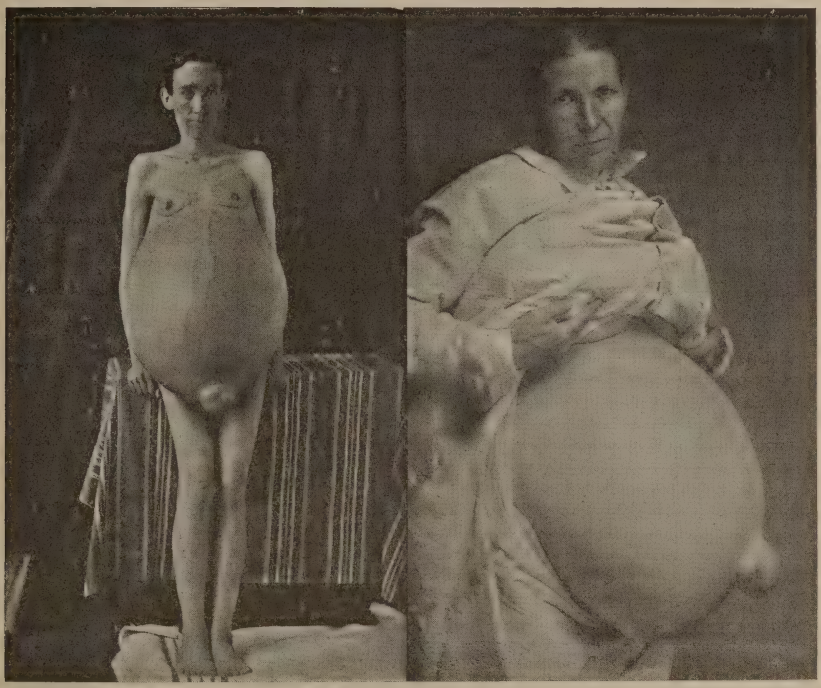
The following case was the first one treated by Elvy in this way. On June 22d, 1897, a man complained that for two days he had been in pain from a swelling which he took to be a hæmorrhoid. On examination a tense, bluish, semi-lunar swelling was found occupying the right margin of the anus, the mucous membrane being continuous with the skin at the outer circumference. The patient stated that he had pushed up the swelling repeatedly, but that it always returned in a few minutes. This was found to be the case. The patient was then given a full-sized Tait's dilator, two and three-quarters inches long and three-quarters of an inch in greatest diameter, and conical in shape, for which a collar was made as described above, so as to grasp the pessary thus improvised at one inch from its point, and prevent it from slipping entirely into the bowel. The patient was directed to return the prolapse when in bed, and immediately to insert the pessary well lubricated and supported by a T bandage. He was also strongly advised to remain in bed on the following day until seen by Elvy. Next morning, however, Elvy received a note to the effect that he felt quite recovered, and it was afterwards learned that the pessary was worn until 4 A.M., when it slipped out, but the prolapse did not show any tendency to return, and has not done so up to the present time.

T. E.

OBSTETRICS AND GYNECOLOGY.

Enormous Ovarian Cysts. ("Southern California Practitioner," January, 1898.) By George E. Abbott, M. D.

In an article on this subject Abbott dwells on two main points : 1st. An argument that heart failure is due, not so much to the sudden re-removal of pericardial pressure, as to the sudden re-duction in endocardial tension. 2d. A plea to remove the fluid in a primary and the sac in a secondary operation, in cases of enormous ovarian cysts. He appends brief histories of four interesting cases, two of which, Case I. and Case II., are shown in the accompanying illustrations.



CASE I. CASE II.

Case I. was reported through the kindness of Dr. T. Gaillard Thomas. It was in a woman of 26. About three years before, the patient noticed a swelling of right abdomen, which increased very rapidly; by the advice of her physician, the tumor was tapped, when 52 pounds of clear yellow fluid were removed. She was tapped five times in all, at intervals of four and six months, amounts of from 10 to 50 pounds being removed each time. The last tapping was five weeks before, when a half-pailful of dark bloody fluid was removed. She measured 58½ inches in circumference at level of umbilicus; from r. a. s. s. to umbilicus was 20 inches; from l. a. s. s. to umbilicus, 11 inches; from pubes to umbilicus, 15 inches; from ens. cart. to umbilicus, 25 inches; her weight was 202 pounds.

The contents of the cyst were evacuated rapidly. The pedicle was

transfixed, ligated with silk, and dropped. The weight of fluid was 80 pounds, of the sac 11 pounds; total, 91 pounds. The patient's pulse was very weak during the operation, necessitating the administration of an ounce and a half of brandy, and afterwards still continued hardly perceptible. Brandy and ether were given hypodermically; but in spite of all efforts the patient did not rally from the shock, and died subsequently.

Case II. was in a woman of 45; and although the fluid (79 pounds) was evacuated rapidly, recovery was good. The case was under the care of Dr. W. E. Bullard, and was operated on under the best physical conditions.

The Induction of Premature Labor. ("British Medical Journal," Dec. 25, 1897.) By John Moir.

Dr. John Moir, who graduated in 1829, and was admitted a Fellow of the Royal College of Physicians, of Edinburgh, in 1837, and who is now ninety years of age, read a paper on this subject. On lately perusing some of the more recent works on obstetrics, he was surprised to find the practice employed in the induction of premature labor so different from what was the teaching from the University Chair in his time, and from what had been his own practice for many years. At the latter end of last century the practice consisted of puncturing the membranes and thus discharging the liquor amnii and then waiting till pains came on. A report by Dr. (?) Morrison, in the third volume of the London "Medico-Chirurgical Transactions," showed that a large proportion of the children were stillborn. Dr. J. Hamilton, the Professor of Midwifery in the University of Edinburgh, in his day, discountenanced the rupturing of the membranes, and advised that they should be kept entire for the sake of the child. He recommended the separation of the membranes from the os and cervix, and if pains did not soon supervene the drawing off of a small portion of the liquid amnii. This was effected by passing up a male silver catheter some inches between the wall of the uterus and the membranes. The point of the catheter having been cut off, and its edges turned in so soon as it was sufficiently introduced, the point was turned in towards the membranes, and the stilette passed into them. This was followed by a flow through the catheter, which was withdrawn as soon as a few ounces had escaped. The pressure on the walls over the minute puncture prevented any further flow. Labor generally supervened in a day or two, assisted, if need were, by the introduction of a gum elastic catheter between the uterus and the membranes, which was left there and reintroduced if it were forced out. Dr. Moir had to a great extent followed out these principles ever since, modified by longer experience and the necessities of particular cases. Thus he had occasionally had recourse to sponge and tangle tents, and occasionally to a small Barnes' bag, as at first introduced, and containing one or two ounces, not such a one as he saw for the first time within the last few weeks, and which quite horrified him. Further, he did not actively interfere so soon as Dr. Hamilton did, further than by dilating the os and cervix, and separating the membranes.

Thereby he had saved the lives of many infants, the great object of the operation. Turning was the great cause of stillbirth, and hurrying on the labor meant the greatest risk to the child. Under the modern treatment, he much feared that the operation very often must end in disappointment as to a living child. His means had been very simple, less heroic, but the results had been on the whole very satisfactory, though encroaching a good deal on the time and patience of the medical attendant. An accompanying table showed that he induced labor on twenty-six different women, from once up to eight times in one case, in all on seventy-two different occasions, seventy-three children being the result, as one was a case of twins.

Premature labor was thus induced in twenty-six individuals, who gave birth to seventy-two children, of whom fifty-nine were healthy, and as likely to live as children born at full time—save one that lived only some hours. Of the thirteen stillborn, eight were the children of two women with very deformed pelves, the subjects previously of embryulcia. In two the children weighed eight pounds. The others were shoulder or breech cases, and the children were lost by pressure on the cord, the version having been had recourse to before the os and cervix were sufficiently dilatable. The proportion of thirteen stillborn children out of seventy-two was very large, but not so if it were remembered that the whole twenty-six mothers had been the subjects either of embryotomy, of tedious labors, or ending with the use of long forceps. In the case of one who lost four children, three of them lived respectively one, four and twenty-four hours, and the mother had the satisfaction of having unmutilated infants, which could not have been the case had they gone on to full time. Of his last sixteen cases, with forty-six births, he lost only one child, besides the embryotomy case last alluded to, where three of the four children were not stillborn. In some of the tedious and lingering cases of this latter set, he did have recourse to turning, but never till satisfied that he could pass the head through the os in one or at most two pains, in which case he thought version quite justifiable, but not otherwise. Till his very last two cases, he never had had a death or serious ailment of a mother. Then both mothers died from blood poisoning, one in 1880 and the other in 1884. Before active interference the duration of the pregnancy should be ascertained ; the fetus must be full seven months. The time allowed to elapse between the end of the seventh month and the operation must depend on the degree of deformity. If great, no time should be lost. If less, one might wait a month longer. He generally began interference a week before he expected the birth. He always had a wet nurse ready till the mother herself could undertake the duty. For opening up cervix and os he latterly and for many years used a rectal bougie. Its thickness and its bluntness were its advantages. It was passed in and then turned to separate the membranes. This was repeated daily. In a few days the vagina, os and cervix gradually became soft, relaxed and dilatable, just as in a full-term case. When this condition had been got, he dilated (with his fingers) the os uteri, but

avoided injuring the membranes. Pains came on by degrees, sometimes at long intervals, in others more rapidly. All this interference was done without pain or inconvenience. Indeed, several of the patients went to Dr. Moir's consulting room, and had the bougie passed. This was done in a few minutes, and they walked home. In one case the patient came ten times, and was eventually delivered of a living child. Occasionally a tangle tent was used to open the cervix, also on one or two occasions a small Barnes' bag, where pains had not come on. Sometimes a small quantity of liquor amnii was drawn off. Sometimes the labor pains were continuous from the time they began, at others very slight and at long intervals, but no interference was required so long as there was no undue pressure on the child, nor until the os and cervix were quite soft and dilatable. Dr. Moir then narrated in detail the history of some of his cases.

The Use of Steam in Gynecology. ("Centralb. f. Gynäk," June 5, 1897.) By Dr. W. Pit'ha.

This article embodies the result of the use of steam as an intrauterine styptic in Prof. Pawlick's clinic in Prag. From this experience Pit'ha would recommend it after an explorative curettement in malignant disease of the corpus uteri, for hemorrhage due to the atonic condition of the uterus after abortion, and, especially, for chronic hemorrhagic endometritis. The apparatus consists of a small boiler furnished with a thermometer and a piece of rubber tubing, to which is attached the intrauterine catheter. This latter is supplied with numerous openings along its distal end to allow ready egress to the steam. The actual cauterization lasts not more than one minute. The slough formed begins to loosen on the tenth day, is cast off about the fourteenth, and the regeneration of the epithelium is completed in about four weeks. All the forty-six patients bore the process without anesthesia.

After the withdrawal of the catheter an iodoform-gauze tampon is introduced for three or four days, and the patient is put to bed until the slough has separated. The disadvantages are that the action of the steam is not everywhere equal, being most intense in immediate contact with the catheter, and that the time required for the after-treatment is longer than that of an ordinary curettement.

L. S. Smith.

The Early Diagnosis and Treatment of Extrauterine Pregnancy. ("Medical News," Jan. 29, 1898.) By G. H. Balleray, M. D.

The author alludes to the generally admitted fact that almost all cases of extrauterine gestation are tubal in origin.

He believes that though the diagnosis in the early months is often difficult, it is not impossible in very many cases. He reports a case of double extrauterine pregnancy in which the diagnosis was made from the physical signs alone, the history being entirely negative. He believes that while women previously sterile for some years are more apt to be the

sufferers from this condition, yet this fact should not be allowed to enter into the diagnosis, as any woman during child-bearing period is liable to this condition. The writer believes that in cases of doubt a careful vaginal and rectal examination under ether will enable the diagnosis to be made before rupture, in the vast majority of cases. He condemns the use of the sound as a diagnostic agent, except in carefully selected cases. He advocates the exploratory operation in cases of grave doubt. The abdominal route offers the greatest advantage in operation for relief of this condition, and all cases should be thus operated upon as soon as the diagnosis can be made, except those in which intraligamentous rupture has occurred.

NICHOLSON.

PEDIATRICS.

Tetany and Autointoxication in Childhood. ("Wiener med. Presse," Nos. 4 and 5, 1897.) By Kassowitz.

The author does not believe that autoinfection can be a cause of tetany. In the summer months, for instance, a time at which the digestive diseases are abundant, tetany rarely occurs, increasing, however, as the autumn and winter months advance, and being most frequent in the spring. He considers that the chronic intestinal affections bear no causative relation to the condition. The dyspeptic, the constipated, and the marasmatic children remain almost entirely free from tetany. He believes that the connection between rachitis and tetany is established; their yearly curves are almost the same. The children who sicken with tetany in the first year of life, and both diseases preponderate in the first two years, suffer almost always from rachitis, while cases of autointoxication are not decreased at this age. In addition to these facts, the phosphorous treatment will not check autointoxication, while it has a decidedly favorable influence upon tetany.

The explanation of the connection he finds in the inflammatory condition of the growing bones, in the hyperemia of the bones of the skull, which further conducts itself to the cerebral cortex to seek an irritated condition of the cortical centres, and, for the development of typical tetany, to adopt an especial centre.

S. McC. HAMILL.

A Remarkable Case of Etocardia with Displacement, the Heart Being in the Abdominal Cavity. ("Medical News," Dec, 11, 1898.) By L. Emmet Holt, M. D.

A male infant of five months, which had been under observation since birth, was presented to Dr. Holt in October, 1897. An abdominal tumor, the size of a goose egg, and only partly covered by normal skin, was observed at birth. The greater part of the tumor was made up of intestine, and formed an umbilical hernia. It contained, in addition, a small, hard,

pulsating body. In other respects the child was normal. In the early weeks of life there was severe cyanosis; at first it was nearly constant, but gradually lessened in intensity. Later it was observed only on exertion ; the child had gained steadily in weight, and the hernia was kept reduced by a pad. At the time of Dr. Holt's examination the child was fat, well-developed, above the average weight. It became intensely cyanosed while crying, and continued so for some moments after. The recti muscles were widely separated, only a thin membrane covered the abdomen in a small circular area in the median line. At the lower border of this area was the umbilicus ; the hernia protrusion was about the size of an orange. In the epigastric region in the median line, extending from the ensiform cartilage to the upper part of the circular area, was a pulsating tumor one and one-quarter inches broad at its base, conical in shape, with its apex downward. It was covered by integument and subcutaneous tissue only. Through this cover all the movements of the heart were seen, diastole and systole being almost as well shown as in an animal when the chest is open. The heart could be pushed up until the apex reached the xyphoid cartilage without disturbance to the child. There was a loud systolic murmur heard over the entire anterior portion of the chest ; it was loudest to the left of the xyphoid cartilage. A respiratory murmur was heard over the entire front of the chest. The heart condition was the only abnormality. Dr. Holt explained the condition by the existence of a large congenital deficiency in the diaphragm, through which the heart had become displaced downward instead of the abdominal contents passing into the thoracic cavity as is usually the case. This reversal of events, he thought, depended upon the deficiency in the abdominal wall. The case is probably unique. S. McC. Hamill.

Pediculosis in Boston's Public Schools. ("Boston Medical and Surgical Journal," vol. cxxxviii, No 3.) By Edward M. Greene, M. D.

The author writes of the prevalence of pediculosis among the school children of Boston, and states some facts brought out in connection with his duties as a medical inspector of schools, as being of interest to the medical profession. He says :

"In the course of his duties there has come before the inspector in a haphazard way a sufficient number of cases of pediculosis to justify the suspicion that this disease was very prevalent, and that nothing but systematic examination and treatment would be of any avail. It was, therefore, decided by the health authorities, in conference with the superintendent of schools, that a systematic examination of all primary and grammar school children should be made by the inspector of schools, with the exception of any children whose parents might object. To each child that was found to be infected there was given to take home a printed notice of his condition, with a prescription and directions for treatment which had been suggested by experts on this subject.

"The following method of treatment for killing lice and nits is suggested by the Board of Health :

"Wet the hair thoroughly for three hours with crude petroleum, of which half a pint may be obtained at a drug store. Then wash the whole head with warm water and soap. Repeat this process on three successive days. The nits may then be removed by combing the hair very carefully with a fine-toothed comb wet with vinegar. Repeat the combing for several days until no more nits can be found. To make the treatment easier and more thorough, the hair may be cut short if there is no objection.

"All the children in a family are likely to be affected, and should also be treated as above.

"Brushes and combs should be cleansed by putting them in boiling water for a few minutes.

"On a separate slip of paper is a prescription for eight ounces of crude petroleum, to be obtained at a drug store. This is usually retailed for ten cents. It is not injurious to the scalp, even when eczema is present, and will destroy the life of nits as well as of pediculi.

"The examinations were made, as far as possible, and the cards given out just before the Christmas vacation, thus giving the children nearly two weeks in which to clean up. The diagnosis of pediculosis was based simply on the presence of ova or "nits" in the hair, as it is difficult or impossible to find the lice in all cases. The nits prove that there have been lice, and that there will be others unless preventive treatment is used."

In one of the large grammar schools 756 children were examined, and of this number only 200 were found to be free from nits. After the Christmas vacation, about two weeks later, a re-examination of 509 of them showed all but 26 still with ova present, due probably to the indifferent manner in which the treatment had been carried out. All but about 50 of the children in the school were girls, the ages six to sixteen years. Pediculosis was more prevalent among children whose parents were of foreign birth.

KINNE.

NEUROLOGY.

A Fatal Disease of Infancy with Paresis or Paralysis, Accompanied by Idiocy or Imbecility and Progressive Blindness, with Symmetrical Changes in the Macula Lutea, with Report of Two Cases. Amaurotic Family Idiocy of Sachs. ("Archives of Pediatrics," October, 1897.)

The author calls attention to the fact that there is no mention of this disease in pediatric literature. The characteristics of the disease he describes as follows: "The infant as a rule is born in apparent health and remains so up to the third or fifth month of life; at this time the infant will be noticed to appear stupid. It will not notice things as other infants. It does not hold its head up, and after a time it is noticed that it is unable to sit up. The muscles of the back are weak. This weakness of muscle increases so as to amount to paralysis or paresis, with or without spastic phenomena. There is an absence of pain or peevishness; there is a listless vacuity about the expression of the face of the infant, and it is noticed that though at first the sight may be good, blindness of a more or

less pronounced type gradually ensues. The infant lies helpless in arms or in its cradle, the muscles relax, and in some cases a little irritation will cause a rigidity, temporary it is true, of the muscles. There is relaxation of the abdominal muscles, and as a rule constipation. Reflexes are usually increased, though sometimes absent. The disease is progressive, and most of the cases thus far published have proven fatal at the end of a year to six years. The disease seems to run in certain families, and in some of the families no less than four cases have been recorded." Koplik reports two cases; the first was a boy eleven months old at the time of this report. The child was dropped when five months of age, and had grown weaker since. For six months he was apathetic and weakly, the eyes had a vacant stare, the muscles were flabby, hands clinched, and there was a slight spastic contracture or irritation of the lower extremities; the head rolled from side to side and the pupils alternately contracted and dilated; there were no teeth; the child was of a rachitic conformity. The eye-examination showed a symmetric white round patch occupying the place of the macula lutea; in the centre of this was a deep cherry-red round spot; the optic disk was pale and gray. The conjunctival reflex was present. The child was not entirely blind. There was hyperacuity to sound, the muscles reacted to the faradic current, but contraction was delayed.

The second case was a female infant, aged one and a half years. The family history was negative. She was healthy until the fifth month; at this time she fell from a chair and from this date began to decline. She was listless and would only cry when hungry, did not seem to grow, made no attempt to walk or sit up; she was constipated, and took food mechanically. The mother thought she did not see objects. At the time of the examination the child was listless, had a vacant look; her tongue alternately protruded and withdrew; she was pale and had two somewhat eroded incisors. The conjunctival reflex was present; the head rolled from side to side when placed on the examining table, and at the same time the extremities were noticed to stiffen and relax alternately. If the infant was touched she started. The knee-jerks were increased, the muscles were flaccid; the abdomen was relaxed; the arms were at times stiff and flexed and at others relaxed. If the infant was picked up the head fell forward on the chest, the arms hung at the sides and the body doubled up in an apparently lifeless state due to the extreme paresis. When her eyes were illuminated with the ophthalmoscope, she followed the light slowly; the fundus of both eyes, at the situation of the macula, showed the same appearances described in the other case. The borders of the white disc were hyperemic.

The two cases of this condition which have come to autopsy showed a prolongation of the first temporal fissure and a confluence of the central fissure with the fissure of Sylvius (arrested development). The arachnoid and pia mater were thickened and the cortex hard; the different layers of the pyramidal cells of the cortex were indistinct. The large pyramidal cells were rounded, the protoplasm was collected together in irregular

shrunken masses about the nucleus leaving large spaces just within the cell wall. A less degree of the same change was found in the smaller pyramidal cells. There was marked descending degeneration found in the sections of the upper part of the cord. S. McC. Hamill.

Anatomical Findings in a Case of Facial Paralysis of Ten Days' Duration in a General Paralytic, with Remarks on the Termination of the Auditory Nerves. ("Jour. Exper. Med.," vol. ii, No. 6, 1897.) By Adolph Meyer, M. D.

Complete paralysis of the muscles of the left side of the face developed ten days before death in a patient suffering from general paralysis. No signs of middle ear disease were observed. Hearing and taste could not be examined. A necropsy was made nineteen hours after death, and an examination of the method of Nissl showed nothing abnormal in the right side of the oblongata, but in the left a proliferation of neuroglia cells was observed within the terminations of the ventral and dorsal roots of the auditory nerve. The cells of the dorsal and ventral nuclei showed changes in the granules, diminution in the size of the cells and their nuclei, and dislocation of the nuclei. Most of the cells in the facial nucleus were swollen; many presented dust-like disintegration of the Nissl corpuscles, dislocation of the nucleus, homogeneous swelling of a part of the cell body, and, in some instances, the formation of a fine, yellowish pigment-like substance. The nuclei in many of the cells were diffusely stained. Vacuoles were observed in some of the nucleoli, and occasionally two nucleoli were observed within one nucleus. Deiter's nucleus was intact. An examination of the contents of the internal auditory canal showed hemorrhages and round cell infiltration of the periosteum which had compressed the nerves and ganglion, and the ganglion was invaded by leukocytes. The pigment of the nerve cells was increased in amount, and the nucleus in some cells was eccentric. Spiller.

PATHOLOGY.

The Vitality of Typhoid Bacilli. (Editorial "British Medical Journal," Dec. 11, 1897.)

Sir Richard Thorne, in his remarks during the discussion on enteric fever at the Royal Medical and Chirurgical Society last month, mentioned some experiments made by Dr. Sidney Martin, who found after sterilizing two samples of soil (one of which was saturated with organic matter) and inoculating both with typhoid bacilli, that the organism survived for at least 220 days in the solid containing much organic matter, while it was dying out in the other in 23 days. He also referred to some experiments of Dr. Robertson, of Sheffield, who found that on unsterilized earth, much contaminated with refuse, the bacilli died down in the winter months only to multiply freely in the summer. Dr. Edward Germano has made some experiments recently at the Hygienic Institute at Bonn

bearing upon this point. They are reported in the "Zeitsch. f. Hyg.," XXIV., 3. He noted the great difference in the periods for which the bacilli, when dried, retained their vitality, namely, from eight days to five months, according to various authorities, and from 21 to 82 days in the more trustworthy observations of Uffelmann. Dr. Germano began by pulverizing, sifting, and sterilizing samples of house dust, sand, humus, peat, tufa and loess, which he then saturated with bouillon cultures, the liquefied portion of agar cultures of the actual fæces of typhoid, placing the preparations in porcelain dishes, some in the ordinary dwelling rooms, and others in a moist incubating chamber. In the former case the bacilli had died out from the cultures in twenty-four hours, and from the excreta in six days, but in the latter case all were active after sixty days. Portions of clothing steeped in typhoid fæces and placed in open saucers in a bedroom retained their infectivity, the linen and cotton for sixty and the flannel for ninety days, the latter being more retentive of moisture. He concludes that the lifting by currents of air of recently desiccated typhoid germs from drains and cesspits alone or adhering to particles of dust must be admitted as a possible origin of sporadic cases, though outbreaks on a larger scale are invariably water-borne, directly or indirectly, Distant diffusions by winds he rejects as highly improbable and wholly unproven, remarking, for example, that the only instances adduced by a German authority, Mewins, of outbreaks occurring in Heligoland after those in Hamburg and Cuxhaven were far more easily ascribed to the imperfectly disinfected and apparently dried rugs, woollen underclothing, etc., brought by convalescent visitors from these towns.

Investigations as to the Toxic Effect of Normal and Pathological Blood-Serum. ("Virchow's Arch.," Bd. 149, p. 405.) By A. Albee.

The investigator injected (intravenous) into rabbits the serum of healthy persons and those suffering from pneumonia, chronic bronchitis, epilepsy, uremia, and puerperal sepsis. The toxic dose of healthy blood-serum was about 9.5 to 11 c.c. per kilogram body weight of the animal.

Usually a few minutes after the injections the animal was seized with spasms, and death soon followed. The poison may be due to an albumenoid substance in the serum, which may be the normal serum itself. From persons suffering from disease the toxic dose is usually 4 to 5 c.c. per kilogram body weight. The serum is more potent when it is charged with carbonic acid, or if it contains the products of degeneration due to disease.

The poisonous effect is felt mostly by the nervous system of the animal, which if it survives usually produces an acute hemorrhagic nephritis.

NEWCOMET.

Growths of the Gall-Bladder and Bile-Ducts. ("Medical Chronicle," November, 1897.) By T. N. Kelynack, M. D.

Growths of the bile passages, with their obscure etiology, have not received the attention that has been given in recent years to neoplasms of

the gall-bladder. Malignant tumors of the gall-bladder are three or four times as frequent in females as in males (gall-stones being four or five times as common in women as in men), while diseases of the bile-ducts are about equally distributed between the two sexes. Pressure from corsets and waistbands, leading to cholelithiasis, may assist in the development of carcinoma of the gall-bladder. Though sometimes seen in the young, middle and advanced life are the periods specially subject to malignant disease of the bile passages, the average age being about 57 years. Gall-stones are generally found in association with primary malignant disease of the gall-bladder, Osler says in at least seven-eighths of all cases. Dismissing as untenable the suggestion that this association is purely accidental, two explanations are offered : (1) The irritation theory, —that gall-stones, acting as local irritants, give rise to a cancerous development—pre-cancerous cholelithiasis ; (2) The concentration hypothesis,—that the presence of a cancerous growth leads to the establishment of conditions favorable to the formation of gall-stones—post-cancerous cholelithiasis. Gall-stones are also met with in connection with growths of the bile-ducts, but nothing like so frequently as in association with malignant disease of the gall-bladder. Secondary calculi are rarely formed in the gall-bladder in cases of primary cancer of the bile-duct; but when found these cases are rapidly fatal. Of simple or benign neoplasms which are sometimes, though *very* rarely, met with are mentioned fibroma, myxoma, adenoma, papilloma, hydatid cyst, and " osseous " gall-bladder. The most common forms of primary malignant growths are of a carcinomatous type, sarcoma being exceedingly rare. Out of 4,578 post-mortems reported in the Owens College pathological records the author found that eight were primary cancer of the gall-bladder, and two were primary cancer of the common bile-duct. It is probable that of all cases submitted to examination in a general hospital malignant disease of the gall-bladder or ducts will be found in only 0.4 per cent., though of malignant growths generally it forms about 3 per cent. While it is necessary to keep in view the broad distinction between primary and secondary growths of the bile-passages, their discrimination is by no means easy, even when the growth is comparatively limited, and is exceedingly difficult where the growth has reached extensive proportions and has invaded adjoining structures. By far the majority of these growths arise in connection with epithelium, and are true carcinomata, of which scirrhus and encephaloid are the most common forms, though all the cases seen by this writer were columnar-celled or cylindrical-celled epitheliomata. As to the site of growth, Osler thinks that the fundus is the commonest situation at which cancer of the gall-bladder originates. Frerichs thought that villous cancer was most frequent on the anterior wall. As regards the ducts, the common bile-duct is the part generally affected; often the growth is near its termination in the duodenum and many actually project into the gut. Macroscopically several varieties of growth may be recognized : villous, nodular, and diffuse forms are specially mentioned. In dimensions these growths vary enormously,—from the size of a pea to

that of a child's head. When connected with the bile-ducts, death may result before the growth has reached any considerable size. Usually the growth is whitish or yellowish-white, sometimes its surface within the gall-bladder is bile-stained, or, when necrotic, has a dark bluish-green color. The growths vary much in shape and consistency: some are hard and firm, while others are soft, juicy, and friable. On section they may show evidence of a more or less distinct cavity, sometimes due to softening, but often the remains of the cavity of the gall-bladder. The most frequent form of invasion of neighboring organs is by direct extension; dissemination by metastasis is usually not extensive. The liver and the adjacent portion of the peritoneum are the parts most commonly affected. The gall-bladder may become adherent to the anterior abdominal wall, omentum, duodenum, or other organs. Fistulæ are common in connection with cholelithiasis; the most usual form is a gall-bladder colic fistula. The gall-bladder may be the seat of extensive ulceration, and sometimes local suppuration is met with in or near the growth. By obstruction of the cystic duct the gall-bladder may become so enormously distended as to lead to its rupture or to intestinal obstruction. The liver may remain of normal size or be enlarged or contracted; it is often adherent to adjoining structures. These growths usually produce death in less than a year; Musser gives the average as a little over six months. In most cases the early symptoms of neoplasm are slight. When the growth arises in the gall-bladder, a tumor can generally be detected; when it originates in the ducts, a tumor too small for detection may early lead to conspicuous symptoms of icterus. The tumor varies greatly in size, shape, and consistency. It is generally smooth, firm, and hard, sometimes nodular, or it may be elastic or semi-fluctuant. In the early stages, and sometimes throughout the whole development, the gall-bladder remains free and mobile; the tumor may even be seen to vary its position with every act of respiration. In cancer of the common duct cachexia is the first sign usually, and persists throughout. In growth of the gall-bladder persistent icterus generally develops late. In most cases pain is present sooner or later, generally in the right hypochondrium, but radiating considerably. Sometimes it is in the right lumbar region; sometimes in the back, especially between the shoulders. When due to the passage of a gall-stone it is sharp and lancinating; in other instances it is of a dull, aching or dragging character. Many patients experience only a slight sense of discomfort on palpation or movement, and some are able to work until a short time before death. There is sometimes much nausea, with or without vomiting. Constipation is often very marked, though in a few cases diarrhea is present. Ascites, when present, indicates extension of the growth to the portal vein or pressure upon it by glands secondarily affected or by inflammatory adhesions. Of the general manifestations sometimes present, pyrexia, cachexia, itching, and cholemia are most frequent. While early detection of malignant disease of the gall-bladder is of the highest importance, it is in most cases impossible to venture on more than a general diagnosis of abdominal growth having some con-

nection with the liver. Cholelithiasis is the most important condition liable to be confused with growth. When, as is usually the case, gall-stones precede the development of growth, early diagnosis is impossible. The cardinal symptoms—colic, tumor, and jaundice—are frequently absent in cholelithiasis; nor do gall-stones always lead to enlargement of the gall-bladder. Exploratory aspiration has been advocated as an aid to diagnosis, but is not free from risk. Catarrhal conditions of the ducts often give rise to considerable general derangement, with temporary jaundice, but promptly disappear under suitable medical treatment. The most important non-malignant lesion in connection with the common duct is impaction of calculi; here a history of biliary colic is almost always obtained. Jaundice is usually not so intense nor so persistent as in cases of primary growth of the duct; it may be remittent. In malignant disease the gall-bladder is usually distended; in calculous obstruction it is often collapsed. Still, too much importance must not be attached to this point. Hydrops of the gall-bladder may strongly suggest primary malignant disease, but the tumor is usually smooth and of a pyriform shape; it generally lies obliquely, its fundus towards the navel. Sometimes the diagnosis can be made clear only by a surgical exploration, and as the condition is a dangerous one, from liability of the distended bladder to burst, compress the intestines, or cause inflammation, the case may be placed in care of a surgeon with a clear conscience. Sometimes a distended gall-bladder may project but little beyond the margin of the liver, yet be much increased in size below it. The common bile-duct may be so enormously distended as to be mistaken for an enlarged gall-bladder. Tongue-like processes from the anterior border of the liver may be met with. Often the process called Riedel's lobe occupies nearly the position of the gall-bladder or lies just above it. Riedel thinks it most common in women whose livers have been compressed by lacing. Irregular processes may be met with in quite normal livers. Malformations of the gall-bladder may rarely add to the perplexities of diagnosis; a case is mentioned where it was four times its normal length. The gall-bladder may be affected by secondary malignant disease. In a case in which scirrhus of the head of the pancreas fungated into the gall-bladder, this organ was clearly palpable during life. Hepatic cirrhosis may simulate a growth of the gall-bladder; so may, it seems, an aneurism. Gastric cancer, especially when involving the region of the pylorus, may be confounded with primary malignant growth of the gall-bladder. Malignant growths are probably much more rare in the duodenum than in the biliary passages. Cancer of the ampulla of Vater has been seen in a few cases. Malignant disease may develop from duodenal ulcer and simulate growth in connection with the bile-duct; or a chronic simple ulcer may be mistaken for such a growth. Duodenal growths do not always cause biliary obstruction. Cancer of the pancreas may so closely resemble a malignant growth of the gall-bladder that diagnosis is impossible. Jaundice is generally present and the gall-bladder is dilated in many cases. A movable kidney may closely resemble a solid growth of the gall-bladder,

being, like it, most common in females and most frequent on the right side. If careful physical examination, aided by the history of the case, do not clear up the diagnosis, an exploratory incision may be desirable. Of other conditions which may be confounded with cancer of the gall-bladder mention is made of hydatids of the liver and omentum, ovarian cysts, tumors of the omentum or mesentery and sarcomatous growths near the root of the liver. Though it has been customary to consider malignant disease of the gall-bladder and bile-ducts hopeless, now that its connection with cholelithiasis has been established something may possibly be done to prevent the development of these growths. As in perhaps all cases of gall-stones there is a possibility of malignant disease, as hepatic exploration can now be done with but little risk, and as the surgical treatment of cholelithiasis has been proved to be effectual and comparatively safe, early diagnosis is of the greatest importance, in order that an exploratory operation may be undertaken without delay. Deaver says he would operate after two attacks of hepatic colic. Until lately physicians have shown much hesitation in dealing with morbid conditions of the bile passages. Though much may be accomplished by medicinal treatment in preventing the more serious consequences of cholelithiasis, when growth has once developed these measures can be of no avail. Surgery may in the early stage accomplish something. In a few cases efforts have been made to excise the cancerous portions, but usually the growth has been too extensive to make such treatment satisfactory. Hochenegg removed a carcinomatous gall-bladder with the adjacent portion of the liver, and six months later there had been no recurrence. Keen, of Philadelphia, removed a cystic adenoma, and the patient recovered. Ullmann, of Vienna, excised a cancerous portion of the liver successfully. But little has been done to cope with tumors of the bile-ducts; where they cannot be removed, Mr. Mayo Robson suggests that benefit might possibly be derived by opening and draining the gall-bladder or ducts or by performing a choledochenterostomy.

CATTELL.

OPHTHALMOLOGY.

Diphtheria of the Eye. ("Archives of Pediatrics," October, 1897.) By T. M. Rotch, M. D.

The author reports a case occurring in a boy of three years. Reddened conjunctivæ with lachrymation and some congestion of the bulbar conjunctiva of each eye, were first noticed on the 21st of September, 1896. The palpebral conjunctiva of both lids of each eye was red and swollen; there was no pus. On the 25th of the month there was a distinct membrane on the conjunctiva of the upper lid of each eye; the upper lids were so swollen that they projected for half an inch over the lower lids. Cultures made from the lids showed the Klebs-Loeffler bacillus, in pure culture. An injection of 5 c.c. of the City of Boston antitoxin was given at 4 p.m. on the 25th. At 7 p.m. the conjunctival membranes were separating and the lids were less indurated. By the following morning the mem-

brane had disappeared entirely from the right eye and almost entirely from the left. By noon the lids were again stiff and board-like, the conjunctivæ were thick, infiltrated over the tarsal surfaces, and the thick membrane had reappeared over large areas; there was also a small patch of membrane on the bulbar conjunctiva at the sclerocorneal margin of the left eye. At 10 a.m. an injection of the same amount was repeated. By three o'clock the same afternoon the condition of the lids was greatly improved; they were soft and flexible; the membrane had almost entirely shed. The improvement continued through the night, but by twelve o'clock the next day the condition was much the same as at the same hour on the previous day. The patch of membrane which had recurred over the sclerocorneal margin and the epithelium had peeled off the cornea over an area of 3 or 4 mm. in diameter, and the next day the edges of the area denuded of epithelium became infiltrated and the whole denuded surface was opaque. On account of the recrudescence of the condition the injections were repeated at intervals of 16 hours from the 27th to the 30th of September, the dose in each instance being 2½ c.c. Under this treatment the eyes recovered progressively. On the 4th of October the child had a profuse urticaria which lasted 2 days. As this subsided the temperature suddenly rose, the child became weak and drowsy; at the same time there was an acute streptococcus infection of the throat accompanied with enlarged cervical glands. The urine was diminished in quantity, contained a large amount of earthy phosphates, no albumin. Dr. Standish, under whose care the child was placed, in making his conclusions; insisted upon the great importance of early bacteriologic diagnosis, believing that the cornea is generally safe with resulting preservation of vision if antitoxin is used early. The temperature was not above 100° F. during the progress of the eye-condition; during the streptococcus infection it went above 105° F.

S. McC. Hamill.

The Functions of the Rods of the Human Retina. ("Lancet," Feb. 12, 1896.) By A. Breuer.

In a paper before the Ophthalmological Society the author dealt with the new theory of Kries regarding the function of the human visual apparatus. He described experiments of his own which tended to confirm the statement that the function of the rods differed from that of the cones. By means of experiments after adaptation of the eye for dark he demonstrated that the sensibility of the periphery of the retina for feebly illuminated objects was very much greater than that of the macula. Under these conditions (dark adaptation) the macular part of the visual field was represented by an absolute scotoma, the exact extent of which was found to vary according to the intensity of the illumination employed. The weaker the illumination and the longer the adaptation of the eye for the dark the greater this area became. Other experiments made by Kries

illustrated the sáme fact. He observed, for instance, that color equations found by direct fixation and in a strong light no longer held good with peripheral vision under feeble illumination. These changes, moreover, were most marked when employing lights of short wave length. All these points were modified examples of the well-known phenomenon of Purkinje, who showed first, that when blue and red objects of equal luminosity were selected, the blue gained considerably in brightness as the eye was longer adapted for the dark. This difference, however, as Kries had shown, did not take place in small fields which fell entirely within the the macula. Hence it was clear that the functions of the periphery of the retina and the macula were distinct. Other authorities attributed these differences to the presence of the yellow pigment in the macula. Mr. Breuer detailed an experiment which proved that this assertion was not supportable. Further, Mr. Breuer in a paper published in the "Zeitschrift für Physiologie und Psychologie der Sinnesorgane," Band XIV., measured quantitatively the amount of absorption effected by the macular pigment for spectral lights of different wave lengths and found it quite inadequate to account for the differences between the peripheral and central vision. These and many other observations made it highly probable that the theory of Kries was correct—namely, that a division of function seemed to exist between the apparatus connected with rods and cones respectively. According to him the latter, the cones, formed a trichromatric apparatus—that is, one capable of distinguishing the spectral colors and requiring for its exercise higher intensities of light, resulting in greater definiteness and clearness of perception. The rods, on the other hand, constituted an apparatus adapted for exercise of function at far lower intensities of light, with the natural drawback of being able only to distinguish between light and dark, and not between colors. Generally speaking it was the cones that were exercised in strong light and the rods in weak. Briefly summed up, this special kind of vision, or the function of the rods, is characterized by (1) its inability to distinguish colors; (2) a very pronounced sensibility for weakly illuminated objects; (3) a preference for rays of medium and short wave length; and (4) its total absence in the macula.

Note on Foreign Bodies Embedded in the Conjunctiva. ("Lancet," Jan. 24, 1898.) By Charles Bell Taylor, M. D., F. R. C. S., Edin.

A man, aged forty-six years, remarkably healthy-looking and powerful, engaged in agricultural pursuits, applied for treatment on December 20th, 1897, complaining of inflammation of the left eye which had persisted for two months in spite of careful treatment by a well-known and accomplished surgeon. The eye was inflamed and there was muco- purulent discharge which welled over on to his cheek, while the cornea was becoming hazy. It was at once concluded that he had a foreign body embedded in the conjunctiva ; he said he had no recollection of any such accident, and although Taylor carefully everted his lids there was no evidence of any extraneous substance; he was very sensitive and resistant

and was therefore placed on the operating table and while under the influence of an anesthetic Taylor succeeded with his finger in dislodging an ear of corn. All the symptoms subsided at once, the discharge ceased, the cornea cleared, and he resumed his occupation.

It is astonishing how apt we are to overlook intruding substances in this situation and how difficult it is to remove them. Taylor has known spicula of corn and rye overlooked for months although the patient has been repeatedly examined by experienced practitioners; they are best removed by the operator's finger inserted into the cul de sac.

Foreign Body of Unusual Size Retained Under the Retrotarsal Fold of the Upper Lid for a Period of Eight Months. ("Ophthalmic Record," January, 1898.) By John W. Croskey, M. D., Attending Surgeon to Wills' Eye Hospital, Philadelphia.

The patient presented himself at the clinic of Wills' Hospital, October 12th, 1897, simply complaining of a "sore eye," and the following history was elicited :

"While chopping wood eight months ago in Russia, a fragment of the wood flew off, striking him in the eye. As the eye caused him very little trouble no special attention was given it. Last March he left Russia to come to America, and as he crossed to Germany he was subjected to a physical examination; his vision was tried, and as this was good he was permitted to pass. He arrived in this country April 14th. The eye was still giving him a little trouble, but as it occasioned him no special inconvenience, medical aid was not sought. When he presented himself at the clinic the appearance of the eye indicated a purulent ophthalmia. Upon everting the upper lid there was found, resting securely in the retrotarsal fold, a piece of wood, as shown in the illustration, 18 mm. long, 6 mm.

wide and 3 mm. thick, weighing, when the moisture had evaporated, one and a half grains. The upper lid was covered with a thick, tenacious membrane and at the inner angle was a mass of granular tissue 8 mm. in length, 7 mm. in width and 2 mm. in thickness. The entire upper lid was

somewhat granular in appearance; the upper and inner quadrant of the cornea was slightly hazy, but the bulbar conjunctiva was free from any hyperemia. The piece of wood was removed, the granular tissue was excised and an astringent wash given, which soon relieved the traumatic conjunctivitis."

The case is cited as one of particular interest; first, on account of the size of the foreign body; second, that it was allowed to remain under the lid for so long a time; and, third, the little damage to the cornea and adjacent tissues by its presence, a possible explanation of which lies in the fact that the piece of wood was macerated and softened by the lachrymal secretions.

DERMATOLOGY.

Some Further Observations on Electrolysis in Diseases of the Skin. ("Jour. Cut. and Gen. Urin. Dis.," September, 1897.) By W. A. Hardaway, M. D.

The author of the article, who was the first advocate of electrolysis in skin-diseases, refers but by name to the affections in which the value of this method of treatment has been universally recognized, namely hypertrichosis (hirsuties, telangiectasis, moles, warts, small tumors, etc.). He prefers to discuss those affections in which the employment of electrolysis has been of more doubtful value. In reference to keloid, he states that he has more often failed than succeeded, but that in view of the usually intractable nature of this trouble, the results are gratifying. He attacks only small growths, and believes that hypertrophied scars may be made much less unsightly by the employment of the electric needle. In port-wine stain the results as a whole are disappointing, although some cases show amelioration, and in a few cases the results are brilliant beyond expectation. In selected cases of lupus vulgaris, lupus erythematosus, tuberculous infiltration of the skin, and small epithelioma, the procedure is of undoubted value. The author advises the making of the current after the insertion of the needle and the breaking of it before the withdrawal of the same. In this manner the procedure will be much less painful. Preference is given to placing the positive electrode in a bowl of water and have the patient make the current by immersing the fingers in the water. A note of caution is sounded against doing too much at one time. Small growths should be treated at successive sittings rather than removed en masse at one sitting. If this advice is followed the scarring will be insignificant.

SCHAMBERG.

LEGAL MEDICINE.

The Limits of Professional Secrecy. (Editorial in "Lancet," Jan. 29, 1898.)

An inquest held on January 8th upon the body of a man who died in Guy's Hospital after having been stabbed was the occasion of an important discussion between the coroner and a witness as to some points of

professional etiquette. The facts were as follows. The man was stabbed on the night of December 27th, 1897, was taken to the hospital on the day after, and died on December 29th. On the afternoon of that day a woman gave herself up at the police station as the aggressor and, this being the first information that the police had received of the matter, they inquired at the hospital and found the man dead. Accordingly at the inquest the point was raised as to whether or not the hospital authorities should or should not have given information to the police. The coroner was of opinion that they should and so were the jury, at all events in the case of "injuries presumably not self-inflicted." The two medical witnesses—namely, the house surgeon in charge of the case, and Dr. Perry, the medical superintendent of the hospital, deposed that the invariable custom at Guy's Hospital is not to give information to the police unless the injured party wanted some one to be arrested. Dr. Perry gave very convincing reasons for this course of action. Cases, he said, of attempted suicide are often brought to the hospital. Suicidal attempts upon life constitute a criminal offence; consequently if it were known that anyone who had attempted suicide would be immediately reported to the police on arriving at the hospital, such an one would not be brought there at all and might very possibly die from want of attention; therefore he thought that it was better for the hospital to be known as a place where no questions were asked unless the patient himself desired some one to be arrested.

This case is only one more example of the way in which the law and the seal of professional secrecy come into conflict, for it has always been held that information obtained by a medical man in his professional capacity is to be regarded as confidential quite as much as that obtained under the seal of confession. In this instance the law seemed to require medical men to put aside their own profession and to aid another. But that the servants of the law can and do on occasion act in the same way is exemplified by what happened some years ago in Whitechapel when there was a very severe outbreak of scarlet fever. The Notification Act was not then in existence, but as the need for arriving at immediate knowledge of the occurrence of new cases was felt the police authorities were employed as sanitary inspectors, and had the right of entry with the permission of the owners or tenants into lodging-houses, thieves' kitchens, and the like. They thus were able to give valuable information as to fresh cases of disease; but while thus employed as sanitary inspectors they were careful to drop their role of legal agents, and although they constantly came across men who were "wanted" in the course of these investigations such men were allowed to go free for the time being because it was rightly argued "if people get to think that our appearance is followed by arrests they will refuse any information about the fever and the whole object of our appointment will be done away with." In the same way hospital authorities argue that their mission is to save life if possible, and therefore that nothing should be done which would in any way interfere with this cardinal function of the institution. It is practically the remnant of the old idea of sanctuary which prompts this action

and that idea is one of the oldest which affect humanity. The ancient Jews had their cities of refuge, so had every other nation with any approach to civilization, while in later times the sanctuary at Durham was famous throughout the kingdom, and although in a hospital it is the victim who is received and not the aggressor, yet the underlying idea is the same.

With regard to the legal aspects of the case it may be asked, "Is not a medical man who conceals the fact of a crime which comes to his knowledge guilty of misprision or of being an accessory after the fact?" The writer is aware that this point has never been decided by a definite court of law, but everyone will remember the opinion of Mr. Justice Hawkins in the case of Fairplay and wife vs. Kitson. Sir John Williams was under examination and the learned judge said to him: "Suppose a medical man were called in to attend a woman and in the course of his professional attendance he discovers that she has attempted to procure an abortion. That being a crime under the law would it be his duty to go and tell the Public Prosecutor?" Witness: "The last legal opinion upon that very point obtained by the Royal College of Physicians is 'Yes.'" Mr. Justice Hawkins: "Then all I can say is that it will make me very chary in the selection of my medical man." This is sound sense, but Mr. Justice Hawkins did not mean it to be inferred that in no case should the medical man in attendance act upon his suspicions. Let us take, for example, the case of a medical man who has reason to think that his patient is being slowly poisoned; under such circumstances it would be his duty to inform the suspected poisoner that if the patient did not improve further steps would have to be taken. Such a case has been reported, and if the same thing had occurred in the celebrated Pritchard case one life at least might have been saved. The writer considered that Dr. Perry and the house surgeon acted in the only way in which they could have done either from the point of professional rectitude or that of expediency It would be a sorry day for hospitals if it came to be known that they were in addition to their health-giving functions the portals to a criminal dock, and although the prevention, detection, and punishment of crime are matters which every good subject ought to have at heart, such are not the objects for which hospitals were founded, nor are their officers to be regarded as agents of the law.

PRACTICAL NOTES.

The Treatment of Neurasthenia.

According to M. A. Fauvet, isolation is the proper treatment to resort to when neurasthenia is accompanied by symptoms of lowered nutrition and muscular weakness, and when a prolonged rest in bed is insufficient to arrest the emaciation. This, he says, is the principal element of the method of Weir Mitchell, Playfair, and Burkart. In France it has given

the best results in the hands of Lemoine, Bouveret, Ballet, and especially Déjerine.

Isolation, continues M. Fauvet, is not only indicated in the grave form spoken of, but should be prescribed whenever the patient's home surroundings become, on account of the exaggerated solicitude of the family prejudicial to his recovery. There is no use in prolonging a treatment which is not carried out accurately, and is subjected to the criticism or the commendation of the patient's family. This applies especially to women. According to Burkart, the patient should have a fund of mental energy and possess a certain intelligence for the aim pursued, and these two conditions are rarely found in neurasthenic women; hence they are peculiarly amenable to isolation. These conclusions are not applicable in all cases. Women who present symptoms of excitability; who suffer from visceral pains or neuralgic pains in the limbs do not benefit from the treatment. Success is also rare in men, in whom, however, motor asthenia is rarely pronounced enough to require a prolonged stay in bed.

Isolation, says M. Fauvet, becomes absolutely obligatory when to the fundamental troubles of nervous exhaustion are added intoxication, morphinism, the chloral habit, the opium habit, ethylism, etc. In such cases the patient receives only the visits of the physician, whose role is complex and delicate. He may, however, be aided by the nurse, who should be sufficiently intelligent and of a good character. She should be amiable, kind, and capable of holding the patient's attention by conversation and reading, and of helping her bear patiently the physician's commands and the weariness of a long isolation; she should also possess enough firmness and tact to exercise a certain ascendency over the patient and insist without harshness on the discipline of the treatment.

The other factors of the treatment are excessive feeding and rest in bed. The latter is necessary during the first six weeks of the complete treatment. In the first stage and in certain cases, says M. Fauvet, Weir Mitchell does not allow the patient to sit up, to sew, to read, or to write in bed. To obviate the inconvenience of this immobility, passive exercise, that is, massage and electrization, should be practised, although in as restricted a manner as possible. With regard to overfeeding, it consists especially in the progressive administration each day of three, four, five, and six pints of milk. Occasionally at the end of a few weeks, one or two eggs a day may be added to the milk diet. The considerable quantity of milk given to the patient must be taken in divided amounts, for it is necessary to maintain the stomach in a condition of comparative rest.

The results obtained by the rigorous application of this method, says M. Fauvet, are most conclusive. Relapses are rare, and recovery in from three to six months is the rule. The probable reason of the success of isolation, the author thinks, is that it is directed to the ætiological nature of the disease, and to the clinical character of its grave forms, the dominant symptoms of which is cerebral depression.—"New York Medical Journal."

Antitoxin Administered per Os.

Dr. J. L. Porter in the "Medical Record" reports the following cases in which antitoxin was administered by the mouth:

The first patient was a girl eight years old. She was first treated with a spray of saturated solution of boracic acid and given a mild laxative, there being some doubt in the diagnosis of diphtheria. Two days later whitish spots were seen on the right tonsil; culture was taken and the bacteriologic report showed numerous Klebs-Loeffler bacilli. The throat was then painted with iron and glycerin for two days. A day later, the membrane having extended over both tonsils and onto the soft palate, and the temperature being 103.4 F., one thousand units of antitoxin were given by the mouth. The patient retained the draught and the next day the temperature was normal and the membrane partly loosened. The following day more than half the membrane had disappeared. Two days later the mebrane had entirely disappeared, and a week later no bacilli were found on bacteriologic examination. The second patient was a boy eight years old. The second day of his sickness there were large patches of membrane on both tonsils, and his temperature was 102 F. A thousand units of antitoxin were administered by mouth, and the next day his temperature was 100 F. and the patches were smaller. The following day the temperature was normal and very little membrane visible. A day later the membrane had all disappeared, and five days later bacteriological examination was negative as to Klebs-Loeffler bacilli. Three other children were treated in the same way and all made good recoveries.

The report of these cases seem to show that antitoxin is not rendered inert by changes in the stomach. In view of this report it would also appear that administration by the mouth is the preferable way, for the following reasons:

1. It is painless.
2. There was no report of rash.
3. No danger of abscess from carelessness in sterilization of the skin or needle.
4. It could be administered by a nurse or attendant.
5. There is not the necessity of administering so concentrated a solution.
6. It would not be objected to by the patient or parents.
7. It is handier, and no time need be lost going for a syringe, when not at hand, or by sterilizing when it is at hand.

The Detection of Albumose in the Urine.

Albumose in the urine is recognized by its yielding the biuret reaction, but Salkowski, in a communication published in the "Berliner klinische Wochenschrift" (1897, No. 17), has pointed out that urobilin gives a similar coloration, so that the test is not altogether reliable. Dr. Ivar Bang, of the Physico-Chemical Institute of the Upsala University, writing in the "Deutsche medicinische Wochenschrift" of January 13th, states that all difficulty may be avoided by the following new method which he has devised.

If urine containing albumose and urobilin be saturated with ammonium sulphate and treated in a centrifuge it quickly yields a precipitate consisting of albumose, albumin and urobilin, together with some uric acid and salts. The supernatant fluid is then poured off and the precipitate well mixed with alcohol of 97 per cent., which dissolves the urobilin, leaving the albumose, the albumin, the salts, and the uric acid The residue after the addition of a little water is now thrown on a filter, which retains the albumin, the uric acid and the insoluble salts; the albumose passes through in the filtrate and may be recognized by the biuret reaction. When pure aqueous solutions are employed the urobilin is always so completely extracted by the alcohol that the residue gives no biuret reaction, but with urine containing a large amount of urobilin the separation may be incomplete, in which case the residue left after the extraction with alcohol is mixed with water and shaken with chloroform and a few drops of sulphuric acid, and the aqueous solution after removal of the chloroform by means of a pipette or otherwise is ready for the biuret test. If urobilin has been taken up by the alcohol it may be recognized by the fine fluorescence produced on the addition of a few drops of solution of chloride of zinc; this test is extremely delicate.—" Lancet."

The Treatment of Hemorrhoids by Injections.

The treatment of hemorrhoids by the injection of carbolic acid and glycerine, mixed in various proportions into the substance of each pile by means of a hypodermic syringe was first used by American surgeons. S. G. Shaleeta, of the Kieff Jewish Hospital (in a reprint from the " South Russian Medical Gazette," Nos. 18, 19, 20, 21, 22, 23 and 24, 1897), has modified this method by using pure liquid carbolic acid, injecting each pile with a Pravaz's syringe to a certain degree of fullness, and completing the operation in one sitting. Two, three or four syringefuls of the acid are injected, according to the number and size of the tumors. For external piles he uses a mixture of two parts of pure carbolic acid to one part of a two per cent. solution of cocaine. Even if four syringefuls of this mixture are injected the quantity of cocaine is not sufficient to cause dangerous symptoms. As a matter of experience only a few drops should be injected where we have to deal with external piles, the syringe being introduced through the mucous membrane, and not through the skin. The history of 69 cases treated in this way is given, and the results in all cases were highly encouraging. When the piles shriveled up and separated the surface presented was similar to that produced by the operation for ligature or the clamp and cautery. The advantages which the author claims for this mode of treatment are : (1) Absence of marked pain during the injections; (2) no necessity for anesthesia (this is a great advantage in old and feeble patients and those exhausted by repeated hemorrhages); (3) little risk of suppression of urine following this operation; (4) no loss of blood during the operation; (5) no necessity to keep the bowels quiet for three or four days after the operation, as is the case in other methods of operating. —" British Medical Journal."

Rules for Prognosticating the Sex of an Expected Child.

Dr. D. E. Keefe, in "New England Medical Monthly," gives the following:

1. When both father and mother are matured; that is over twenty years; if the vigor of the husband is relatively greater than the wife's, expect a female child.

2. When with all other conditions the same as in 1, only that the mother is relatively more vigorous than the father, expect a boy.

3. When the parents are relatively of equal vigor, expect an equal division of the children, as to sex, for nature seeks the conservation of the sexes. If, however, with the vigor the same, the complexion of the mother is dark and the father is light, you may rather expect a boy. If on the other hand the father is dark and the mother of light complexion, rather lean towards a girl.

4. When one of the parents, though apparently as vigorous as the other, is comparatively either immature or senile, consider the one nearest the age of stalwart maturity as the more vigorous. For example: A wife sixteen to eighteen, or forty-two or over, with a husband twenty-five to forty, prognosticate a daughter. On the other hand, with a husband sixteen to twenty, or forty-eight or over, and a wife twenty to thirty-five, expect a male child.

Very many exceptions to these rules will occur; so many, indeed, as sometimes to make them appear of doubtful application. Nevertheless, a patient and extended trial will prove their utility.

Treatment of Chorea by Massage.

Fedorow reports five cases in girls seven to fourteen years of age treated satisfactorily with massage and gymnastics. The etiology was unknown in three cases, in another fright, and in one psychic infection from a sister, were demonstrated as the causes. All the patients were anemic, badly nourished, but had previously been healthy. Internal organs were normal. The treatment consisted in tub-baths of 27° R.; in some cases iron and arsenic was administered, and with this a general massage of the whole body. In three to four days the choreic movements became weaker; in one severe case only was improvement delayed for four weeks. After the symptoms began to improve, passive gymnastics —flexion and extension of the extremities and of the head—were practised. Recovery took place within two to six weeks, in more severe cases after two and a half months. Contraindications to this method of treatment are acute polyarthritis, great valvular disease of the heart, etc. The good effects of massage can probably be referred to a lowering of the irritability of the cortex of the brain, by the slight irritation of the peripheral nerves. In chorea folowing infectious diseases it may be due to an improvement of the circulation, and an increase of metabolism with resulting rapid excretion of the toxins circulating in the system.—"Pediatrics."

Treatment of Chronic Ulcers of the Legs.

Langseorff ("Centralb. f. Chirurg," Nov. 20, 1897.) has treated over 200 ulcers of the leg, without a single failure, by means of the following method:

The leg is rubbed with green soap, washed and dried. The ulcers are then dusted thickly with calomel, which is stirred to a paste with a wet cotton swab. Fine salt is then dusted upon the paste, and is in turn mixed with it. By this means corrosive sublimate is formed which in its nascent state acts very energetically, and for three or four hours causes a strong, burning sensation, which in a nervous patient may require a morphin injection. On the following day the granulations are completely burned off, and there is presented a clean wound, with possibly a small slough in its centre, which soon separates. Pain has entirely disappeared. Under a stimulating salve containing turpentine, and with as complete rest as is possible, the ulcer is quickly covered with epithelium. Only occasionally is it necessary to touch excessive granulations with a crystal of cupric sulphate. It sometimes happens that the ulcer partially closes and then the healing process comes to a standstill. In these cases a solid salve is spread upon a visiting-card and bound firmly upon the ulcer. From the effect of the moisture the callosities quickly dissolve and the growth of epithelium is resumed. In only two cases of the series were Thiersch grafts found necessary. After healing is complete the leg and foot are covered with zinc salve as high as the knee. This dressing is left in position two weeks. A good effect is also produced by this treatment in eczema of the lower extremities associated with numberless minute granulating ulcers. In these cases the calomel and salt are mixed into a paste, and spread upon the leg, which has previously been scrubbed with green soap and water to remove all fat from the ulcers.—" Journal of the American Medical Association."

The Lithotomy Posture in Parturition.

Dr. Oscar Schmidt, of Moscow, contributes an article on this subject to the " Centralblatt für Gynäkologie " for November 27th.

He says that he has made use of this posture for about eight years past, employing it while the head is in the pelvic cavity and when it is at the outlet. The patient lies on her back, lengthwise of the bed, and at the beginning of a pain two persons, usually the physician and the midwife, standing one on each side of the bed, seize the patient's legs, bend her knees to the utmost, spreading them apart as much as possible, and flex the thighs on the pelvis as in the lithotomy posture, at the same time everting the toes. That one of the physician's hands which is not employed in holding a knee may make pressure upon the child's breech, and so strengthen the action of the abdominal muscles. When the pain subsides, the limbs are allowed to resume their natural posture in the bed. The author thinks the favorable effect of this procedure is demonstrable. In the case of a primipara, he says, the segment of the fœtal head that appears at the vulva during a pain is much larger than when she simply lies

on her back. The difference is seen most strikingly in multiparæ when the head is in the pelvic cavity, and often very few pains with the woman in the lithotomy posture suffice to complete the birth. Almost without exception, says Dr. Schmidt, the patients take kindly to this procedure, and he has even observed, in cases in which it was an object to delay the expulsion of the child, so that he has omitted to resort to it, that the patient herself would assume the posture voluntarily during the pains, holding her knees with her own hands. He adds that since he adopted this device the occasions of his having to resort to the forceps operation, either high or low, have been reduced to a minimum, and almost without exception they have been brought about by pathological conditions.—"New York Medical Journal."

The Prevention of Cinchonism.

An editorial in the "Therapeutic Gazette" says that within the last few years they have referred to the untoward effects produced by various drugs, and have called attention in particular to the disagreeable after-effects which often ensue when quinin is administered. With the more moderate of these effects nearly everyone is familiar, for the laity often prescribe quinin for themselves in such large doses that they speedily experience the tinnitus, or deafness and headache which full doses of this drug so readily produce. There are two ways in which these disagreeable symptoms may to a certain extent be modified by combining with the quinin other remedies. The oldest way, and the method which is perhaps resorted to most frequently, is the administration with each dose of quinin of five or ten grains of bromid of potassium or bromid of sodium, which seem, to a considerable extent, to modify the aural symptoms which we have mentioned. If the dose has been a very large one, and the patient is particularly susceptible to quinin, it may be well to give at the same time with the quinin a little fluid extract of ergot for its tonic effect upon the cerebral and meningeal blood-vessels. Another method for the prevention of cinchonism is that which has been suggested by Aubert within the last few months. He asserts that the administration of atropin in the dose of 1-250 to 1-150 of a grain with each dose of quinin greatly modifies the symptoms, and in those cases where the quinin was given for the relief of the neuralgia aided the quinin very materially in relieving the pain. It must be remembered, on the other hand, that in those who have a susceptibility to atropin, the dryness of the mouth and throat and the disordered vision which may ensue after this dose of the drug might prove more uncomfortable to the patient than if the quinin had been administered alone.

Antiseptic Treatment of Burns.

Dr. M. B. Werner ("Philadelphia Polyclinic") gives the following simple treatment, for which he claims excellent results :

1. Place the burned member or surface into a carbolized bath of from 2 per cent. to 5 per cent., depending on the age of the patient and the ex-

tent of the injured surface. A threefold effect is gained by this, i.e., antisepsis, asepsis, anesthesia.

2. Remove all the acid solution by a second bath in the physiologic saline solution.

3. Dust the entire surface with a powder containing acetanilid (1 part), compound zinc stearate (5 parts).

4. Cover the surface with narrow strips of Lister's green protective, or, if economy must be studied, thin gutta-percha tissue can be used instead.

5. Place wet sublimated gauze ten to twenty thicknesses over and around the surface, followed by ordinary bandaging.

The subsequent dressings differ only in one or two points from the first, as stated above. The carbolized bath is replaced by one of either the saline solution, or a weak solution of mercury bichlorid, followed by a spray of hydrogen dioxid, which will aid in removing all the pus and loose dead tissues. After this the surface is dusted with the powder, and protective strips, gauze and bandages are applied. These dressings are changed as often as needed, the extent and depth of the burn making its own rule.

Kinesitherapy in Heart Disease.

Colombo ("Gazz. méd. di Torino," 48, N. 39, 40, 1897) pleads for a more general use of kinetic treatment in heart disease. Even in advanced cases he seems to think such treatment is very advantageous. Milder forms of treatment, for example, the Swedish method of gymnastic exercise, should be started at first, and afterwards more active methods, for example Oertel's, can be tried. The action of the Swedish method is most marked upon the peripheral vessels, whilst Oertel's system acts more directly upon the heart itself, so that dividing heart disease into disease of central or cardiac, and that of peripheral or vascular origin, the different methods could be applied accordingly. The Swedish method, moreover, has this advantage, that it can be applied in severe cases which cannot leave their bed.—Barié ("Sem. méd.," November 12th, 1897) advocates the treatment of heart disease by Swedish gymnastics. The aim of the exercises is to facilitate the work of the heart by increasing its contractile power, and by lessening the peripheral resistance. The exercises are a series of regulated, combined or alternating movements of resistance or opposition. The movements employed fall under the main groups: (1) Kneading, rubbing or stroking of the muscular masses in the limbs and abdomen; (2) movements of circumduction which facilitate the circulation in the main venous trunks; (3) movements which favor respiration. The exercises are very varied, and accomplished by means of passive and active movements, numerous different manipulations, and by special apparatus. The average duration of the treatment ought not to be less than an hour a day during three months of each year. The treatment is suitable for cases of dilatation, hypertrophy, fatty degenera-

tion, chronic myocarditis, and various neuroses and functional affections of the heart. Such symptoms as shortness of breath, palpitation, insomnia, cephalalgia, giddiness, gastric phenomena, edema, ecchymosis, cyanosis, improve or disappear under treatment. The pulse-rate is lowered, but rises again as soon as treatment is interrupted. Rational application of the treatment does not exclude internal treatment by ordinary medical means, and the two methods may often be employed simultaneously with the best results.—" British Medical Journal."

Disinfection of Sleeping Apartments.

Professor König, of Gottingen, relates that at one time, while he was practising medicine in Hanau, he discovered that his bedroom was inhabited by bugs. A friend assured him that he could easily get rid of the pests by fumigating the apartment with corrosive sublimate. This method was duly resorted to, and when the room was opened the dead bodies of various kinds of insects were seen strewn about the floor. As a result, the same plan was tried in private houses after scarlet fever or measles, and in hospitals after erysipelas or pyæmia, with " most satisfactory results." Since adopting this method, König has never seen a second case of a contagious disease which could be attributed to infection remaining in the room in which the patient had been confined. About two ounces of the corrosive sublimate is put on a plate over a chafing-dish, and the windows and the doors of the room are then closed. At the expiration of three or four hours the windows are opened and the apartment is thoroughly aired—a very necessary operation. Persons entering the room are, with good reason, advised to take the precaution to hold a sponge or cloth over the mouth and nose in order not to inhale the vapor. On the following day the windows are again closed and some sulphur is burned in the room in order to neutralize (sic) any of the mercurial fumes which may linger about the furniture and other articles. After the room has been again aired and cleansed, it is said to be ready for occupation. Whether any cases of mercurial poisoning have occurred is not stated, but the risk of this would appear to be considerable.—" Pharmaceutical Journal and Transactions."

Large Doses of Iodin in Eye Affections.

Pagenstecher (" Klin. Monatsbl. f. Augenh," December, 1897) remarks that large doses (5 g. to 25 g. a day) of iodin are often well borne, even where the usual doses call forth symptoms of iodism. The first case in which the use of large doses of KI gave striking results was one of orbital tumour, thought possibly to be sarcomatous, which was increasing in size under small doses of KI. Removal of the orbital contents was proposed, but Pagenstecher was led to try much larger doses of KI first of all; this brought about some shrinking of the tumour in a few days, and the immobile eye became less fixed. Iodid of sodium (7 or 8 g. a day) was now combined with the iodid of potassium, and within a

fortnight the protrusion of the eye had so far receded that the lids could be closed. A fortnight later the swelling had completely disappeared. For a time the treatment caused profuse night sweats. Another class of case in which this treatment has been very beneficial is episcleritis, more particularly when there is much thickening, with secondary involvement of the iris and cornea. In paresis and paralysis of ocular muscles similar results have been obtained, but not so uniformly. Pagenstecher begins straightway with large doses of KI in combination with bromid; 20 g. KI and 75 g. KBr in 200 g. of water, a tablespoonful directly after meals, three times a day, either plain or in seltzer water or in milk; the dose is increased by a tablespoonful a day till 8 or 10 g. of KI are being taken. After a fortnight iodid of sodium in the same or larger doses is ordered, and continued, perhaps, for several months.—"British Medical Journal."

Tincture of Myrrh in Diphtheria.

Dr. Ströll, writing in the "Allgemeine medicinische Central-Zeitung," very strongly recommends tincture of myrrh in diphtheria. The mixture he uses is composed of tincture of myrrh 4 parts, glycerin 3 parts, and distilled water to two hundred parts. This is given very frequently—every hour, or even every half hour, in the daytime, and every two hours at night, infants up to the age of two taking a large teaspoonful (seventy-five minims), older children double that quantity, and adults three times as much. This is continued until the membrane has nearly disappeared, when the doses are only given every two hours. After all the membrane has gone the treatment is continued for a couple of days, the interval between the doses being increased to three hours. This, of course, is with the view of preventing any recurrence. Usually the fever and lassitude disappear in twenty-four hours, so that a child may frequently be found within that time sitting up in bed playing. He says that there does not seem to be any need for local treatment, but in the case of older children and adults a gargle containing one half per cent. resorcin may be employed every hour or oftener in the daytime, and where it is desired the tonsils may be painted every hour with the tincture of myrrh undiluted. Where the larynx is involved, Dr. Ströll prescribes the myrrh and glycerin mixture in an inhaler or spray to be used every half hour. By the employment of this method, Dr. Ströll states that he has only lost one case out of eighty, and he has collected reports from several other practitioners, in various parts of the world, who have treated altogether 182 cases with 22 deaths. No mention, however, is made in his own or in the other cases of bacteriologic verification of the diagnoses. The rationale of the efficacy of myrrh is supposed by Dr. Ströll to be that this drug increases the phagocytic elements in the tonsils.—"Lancet."

Foreign Bodies in the Ear.

Burnett ("Philadelphia Polyclinic,"), in commenting upon a case of foreign body in the ear occurring in his practice, advances the following practical deductions :

1. Always examine an ear said to contain a foreign body, and find out whether such is the case before endeavoring to remove the foreign substance.

2. Whatever a child puts into its ear, or allows to be placed there, is placed there easily and painlessly, and can be as easily and painlessly removed by any physician who can properly syringe the ear.

3. A foreign substance was never known to be impacted in a child's ear by the child. Neither has a foreign body ever been impacted in the ear by syringing.

4. When impaction has occurred, or any injury to the ear, after the insertion of an inanimate substance by the child into its ear, such injuries have been the result of instrumental endeavors at extraction by means of probes, hooks, forceps, etc. The latter are never needed by anyone at first, as the syringe will suffice in all cases where no violence has been exerted upon the ear. Instruments of any other kind should never be employed at any time by any hand but the most skilled.

5. If animate bodies, insects, etc., get into the ear, a few drops of oil will smother them, and they can then be syringed from the ear. Maggots can be destroyed by a few drops of ether or chloroform put into the ear. They can then be lifted out by means of forceps. But this latter act can be performed only by an expert. However, the intense pain caused by the presence of maggots in the ear can be allayed by the use of chloroform in the ear, as stated above.

Rules for Orthopedic Practice.

1. Discard the idea of rheumatism of a single joint in children (especially in the hip) unless it is positively proved by acute symptoms. Tuberculous disease is much more probable, and treatment for the graver condition will frequently abort threatened joint-destruction.

2. Any child may have local tuberculosis of a joint, no matter what its ancestry; heredity signifies only degree of resistance.

3. Do not attribute to "habit," a persistent limp. An inflammatory or paralytic cause is more probable.

4. All persistently fretful infants (especially those that cry when moved) should be carefully examined for evidences of spinal spondylitis. Older children, with stubborn irritation of the lung, stomach or intestine, should always be critically examined. Early diagnosis and treatment will accomplish excellent results.

5. In lateral curvature of the spine the indiscriminate and unskilful use of mechanical appliances does harm, while to neglect these means of fixation in spinal caries is ruinous.

6. To "let alone" a curable congenital bone-deformity after the first week of life is to lose the golden opportunity for cure.—De F. Willard.

The Local Treatment of Premature Baldness consists of the proper cleansing of the scalp and the stimulation of the sebaceous glands to healthy action. The tincture of green soap makes an admirable shampoo for the scalp, removing in a thorough manner the epithelial and sebaceous debris there present. The list of hair tonics is legion. The following may be recommended as extremely useful:

Resorcin	2 drams.
Salicylic acid	30 grains.
Castor oil	1 fluidram.
Rectified spirit	6 fluidrams.
Oil of bergamot	1 fluidram.
	Mix.

Rub well into the scalp every night.

When greater stimulation is desired, one may use:

Mercuric chlorid	12 grains
Betanaphtol	40 grains
Castor oil	1 fluidram
Rectified spirit Bay rum	3 fluidounces

—SCHAMBERG, "Philadelphia Polyclinic."

How to Find Out if a Room is Damp. To ascertain whether or not a room is damp, a kilogram of fresh lime should be placed therein, after hermetically closing doors and windows. In twenty-four hours it should be weighed, and if the kilogram has absorbed more than ten grams of water (that is, more than one per cent.) the room should be considered damp, and classed as unhealthy. The question of the dampness of dwellings is a frequent cause of dispute between landlord and tenant, and is naturally solved in the negative by the former. The question can be settled in the future by the test of the hydration of lime, which will give irrefutable proof of the validity of such complaint.—"N. Y. Dietetic and Hygienic Gazette."

Tympanites.

Turpentine, 1 drachm.
Oil sweet almonds, 4 drachms.
Tincture opium, 2 drachms.
Mucilage gum Arabic, 5 ounces.
Cherry-laurel water, 4 drachms.

A teaspoonful every six hours.—*Medical Press and Circular.*

Chloasma. The "New York Medical Journal" quotes the following from a German exchange:

Chloral Hydrate,	2 parts.
Carbolic Acid,	1 part.
Tincture of Iodine,	1 part.

M. Sig.: To be applied with a brush.

INTERNATIONAL MEDICAL MAGAZINE

An Illustrated Monthly of Medical and Surgical Science.

Edited by
WALTER L. PYLE, A. M., M. D.

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The Abolition of Midwives.

In this day of superior medical education and multiplicity of well-trained doctors, it is astonishing that urban communities tolerate the ignorant and dangerous custom of employing midwives in confinements. It can be excused in very isolated rural districts and among savages, but in thickly settled regions where numerous qualified practitioners are within easy call, to allow an incompetent class like midwives to practice such an important branch of medicine as obstetrics, combining all the the refinements of therapeutic and surgical skill, is nothing less than criminal. After long years of war with quacks and charlatans most respectable communities have passed stringent laws regulating the practice of medicine, and these laws must be speedily applied to midwives as well as to other unqualified practitioners. *The midwife must go!*

This question has long occupied our minds, and it has been our intention for sometime to direct editorial attention to it. Extra impetus has been given us recently by the masterly and convincing paper on the subject in the *Medical News*, February 18, 1898, by Dr. Henry J. Garrigues, of New York, who, over a decade ago, was most instrumental in defeating a bill before the New York Legislature aiming to grant a charter to a certain college of midwives in New York City. In bemoaning the present

laxity and paucity of laws restricting this dangerous and really illicit practice, Dr. Garrigues reviews the subject from every possible standpoint. He details how the original employment of midwives arose from lack of obstetric as well as medical and surgical knowledge and an exaggerated sense of modesty, and he shows that since the beginning of the Seventeenth century, when Parisian doctors first began to assume the direction of normal labor cases, midwives have been gradually relegated to practice among the ignorant and superstitious class. The reason of this domination of the field of midwifery by medical men is emphatically attributed to the plain superiority of the new over the old system wherever it has been tried. Among his arguments, Dr. Garrigues says:

"Obstetric work presents certain peculiarities which make it preeminently objectionable to tolerate its performance by half-taught or entirely ignorant persons. While in other branches of the healing art every case concerns the well-being or restoration to health of one human being, in obstetrics every case involves the fate of at least two individuals. Besides the specific services rendered by the obstetrician, at least three other specialties—internal medicine, surgery and pediatrics—are more or less constantly involved. In no other department does prevention of evil play a similar rôle. For instance, a cross-presentation recognized before rupture of the membrances may be easily corrected by external version, and thus the necessity for difficult and dangerous operations at a latter stage be averted. Very often the demand for immediate action is imperative, so that no time is left for examining books or consulting men of larger experience."

By reliable statistics Dr. Garrigues shows the bad results of the ignorance and neglect of antisepsis in private obstetric practice, in which the mortality is twice as great as in hospitals, and adds that this is in large part a sad sequel of the employment of midwives. Even in European countries with strong governmental supervision constant complaints are being made in regard to the inefficiency of midwives. In the January number of the INTERNATIONAL, there is a report of a case of tetanus neonatorum due to the application of a clod of earth to an infant's umbilicus by a Cleveland midwife, who likely is still plying her deadly trade unmolested. As a result of lax obstetric practice in New Jersey, blindness due to ophthalmia neonatorum has increased five times more rapidly than the population. While still-births in Berlin occur in 3 per cent. of confinements, in New York they reach 8 per cent.

In addition to all their other evils midwives are the most inveterate

quacks. They first pretend to practice obstetrics, later gynecology, then diseases of children, and finally they solicit and accept cases of all kinds. They deluge the newspapers with their cards, many of which contain apparent advertisements of abortionists; in which crime as well as infanticide they are protected by their right to render without question certificates of still-birth.

There is absolutely no reason for the perpetuation of midwives. In the majority of confinements capable physicians are near at hand, and if the patient is very poor, efficient treatment can be obtained at a fee as low as that of the midwives and even gratis at her own house or in a hospital. Even in the remote rural districts, physicians are able to attend all labor cases, and should a woman fail to secure medical aid she is much better off in her confinements when left alone, or assisted by a friend, than when in the hands of an ignorant, superstitious and conceited midwife.

In pursuance of his belief of the uselessness, dangers and nefarious practices of midwives, Dr. Garrigues proposed to his section of the New York Academy of Medicine a resolution, immediately passed, and which we quote in full in the hope that every one of our readers will urge the adoption of a similar resolution by his County or State Society:

RESOLUTION.

WHEREAS, midwifery, or obstetrics, is an important branch of medical science and art;

WHEREAS, midwives are not recognized by the State;

WHEREAS, Section 153 of the Laws of New York, 1893, Chapter 661, amended in 1895, prescribes penalties for any person, who, without being then lawfully authorized to practice medicine within this State, and so registered according to law . . shall assume or advertise any title which shall show, or tend to show, that the person assuming or advertising the same is a practitioner of any of the branches of medicine;

WHEREAS, midwives by their ignorance and lack of cleanliness, do great harm to parturient and lying-in women, and assume to administer potent drugs to them without the advice of a physician, and often treat sick women and children, and frequently are guilty of causing abortions.

Resolved, That the Section on Obstetrics and Gynecology strongly recommends the taking of immediate steps to secure the passage of a law providing for the supervision of all persons, not legally qualified physicians, now engaged in practicing midwifery, and debarring from such practice all persons not proven to be competent and qualified; and also containing such provisions as, without conflicting with existing rights, shall tend to confine the practice of midwifery to qualified medical practitioners.

Appendiceal Operations.

WHILE the trend of medical opinion is toward operative interference in appendicitis, it is interesting, and may be suggestive to many general practitioners, to read what one physician claims to have achieved in this disease by more conservative methods. Dr. H. W. Carpenter writes to the *Journal of the American Medical Association* that in a practice of nearly forty years, seeing from five to twenty cases of appendicitis yearly, he has lost one only, and has had none operated upon, except in a very few cases in which an abscess formed in the iliac region, when he aspirated the contents and afterward applied compression. When called in the first stage and there was much pain, he gave usually $\frac{1}{4}$ grain of morphin with $\frac{1}{150}$ grain of of atropin. Bags of ice were applied over the seat of pain and often followed after 24 or 48 hours by poultices, preferably of yeast and charcoal, with a good quantity of potassium nitrate added. The medicines consisted of tincture of aconite from the start in $\frac{1}{4}$-minim doses every 2 hours, $\frac{1}{120}$ grain of mercuric chlorid every hour, and a teaspoonful of olive-oil or castor-oil every 2 or 3 hours. In some cases he preceded this course of medication of one dose of 15 or 20 grains of calomel. Medicine is still too much of an empiric art to permit of ignoring or sniffing at such an experience as this, even granting that the observer may not be an expert in the diagnosis of the disease in question, and therefore may, in a considerable proportion of the cases, have been mistaken as to its nature. From 5 to 20 cases yearly for 40 years would make in all from 200 to 800 cases. Suppose the total to have been 200, and one-half to have been something else; still 99 out of 100 cases of appendicitis cured without the present popular operation would be a most striking result. We have no knowledge as to Dr. Carpenter's professional standing, but the results claimed by him if true, are most remarkable, and a good many reputable practitioners have reported the cure of a very large proportion of their cases of appendicitis by means of a similar method, including usually, ice and poultices locally, with calomel internally. The medical pendulum is likely to swing first to one extreme and then to the other, and, just as in other domains, fashions with our profession have their periods of rise and fall.

* * *

Nits.

THE RESULTS of the examination of the heads of children in the public schools of Boston, disclosing a very large percentage of cases infested with parasites, have been widely published, and Boston has exhibited no desire to suppress the facts. This publication, however, has evidently aroused the school authorities of Phila-

delphia, and we understand that they are making preparations for a similar investigation. These preparations consists in issuing small bottles of petroleum to the children of the schools, with directions to rub the oil into their heads at night—keeping away from the fire and lights—and wash the head thoroughly in the morning. But is this a wise move, and should statistics subsequently show a lower percentage of parasites in the heads of Philadelphia school children than in those of Boston, would this, in reality, be a triumph or a defect? For why, we ask, has Boston so readily published her apparently damaging statistics? Can it be that she is proud of them? For we must not forget the opinion of an eminent biologist, whose name just now escapes us, that these parasites seek the Bostonese heads in greater numbers because they find there richer and purer food; that the very activity of the Boston brain attracts and multiplies them, in fact it has been hinted that the parasites were a wise provision of nature to relieve the tension of the full and rapid cranial circulation, and thus preserve a little longer those brilliant minds so valuable to the community and the nation. A somewhat lower view however—but not without its support from eminent authority—claims that the percentage of parasites and nits in the Boston head has always been high; that it occurred accidentally at first from the overcrowding of the Mayflower, and we know it was awfully overcrowded with so many ancestors, and that the irritation caused by the parasites, and the consequent scratching, created an increased cerebral circulation and fullness, and thus indirectly, but none the less surely, favored that excessive mental growth for which Boston has been ever distinguished. Is there anything to choose between these rival theories?—Nit !

* * *

Ophthalmic Paradoxes.

The following ridiculous statement recently appeared in a prominent Western medical journal:

"A Missouri girl recently had a cataract burned from her eye by the popping of some hot grease in her face and eye. She bandaged the burn for a few days with tea leaves, and on removing the bandage, found that she could see as well as ever."

We would be pleased to have the author of this item of news tell us: 1. How a cataractous lens could be freed from an eye through a perforation in the cornea made by a burn, and the cornea remain sufficiently clear and regular to allow good vision; 2. How the eye could be "as

good as ever'' immediately after the accident when the principal refracting medium had been removed. If the latter statement is true the eye originally must have been very bad—highly myopic. It is surprising that a reputable medical journal would allow such nonsense to appear in its columns. Likely it has been copied thoughtlessly from a lay newspaper, where it had its origin in the accidental removal by a grease burn of some corneal or conjunctival growth ignorantly called cataract.

Not long since from a similar source we read of a, murder's photograph appearing in the eye of his victim. The case was related in all seriousness, and was cited as an instance to prove the advisability of immediately examining the eye of a recent corpse found dead under suspicious circumstances. Though the story is the veriest bosh, it was extensively copied in the American newspapers. Even admitting the possible action of the retina as a sensitive surface, a retinal photograph could only be seen by ophthalmoscopic illumination. The chances are that the media would not be sufficiently clear to admit of the use of the ophthalmoscope, and again it is hardly to be supposed that policemen and night-hawks are adepts in ophthalmoscopy. To focus an image on the cornea would require a high power convex lens accurately adjusted between the murderer and his victim, and in the excitement of an assault, it is very likely that such precaution would be omitted.

BOOK-REVIEWS.

DISEASES OF THE STOMACH. THEIR SPECIAL PATHOLOGY, DIAGNOSIS AND TREATMENT, WITH SECTIONS ON ANATOMY. PHYSIOLOGY, ANALYSIS OF STOMACH-CONTENTS, DIETETICS, SURGERY OF THE STOMACH, ETC. By John C. Hemmeter, M. B.; M. D.; Ph. D.; Clinical Professor of Medicine at the Baltimore Medical College; Consultant to the Maryland General Hospital, etc.

This work is divided into three parts . the first of which deals with the anatomy and physiology of the digestive organs, and the methods and technic of diagnosis. Part second discusses the therapy and materia medica of diseases of the stomach. The third part describes "the gastric clinic," i. e. diseases such as acute and chronic gastritis, ulcer and malignant growths of the stomach.

The first part is an interesting one for the student. The anatomy and physiology of the stomach and intestines are briefly and concisely described, and the text is further aided by several exceptionally good diagramatic illustrations, especially that which shows the blood and lymphatic supply of the different layers of the stomach.

In view of the more recent investions of Dr. C. Schlatter, some of the statements

made in the chapter upon ferments may have to be modified to some extent. This is especially true in reference to the anti-fermentative action of hydrochloric acid. Dr. Schlatter's case, however, has been reported subsequently to the issue of this book, and Dr. Hemmeter should not, therefore, be criticised for accepting as facts the general belief of physiologists and experiments. The general practitioner probably cannot avail himself of the numerous devices which are described in the technical chapters on diagnosis. The apparatus used are considerably too complicated for any but laboratory work. The chapters upon the therapy and materia medica of diseases of the stomach are in the main good. Dr. Hemmeter thinks that the question of the relation of alcohol and alcoholic beverages to the digestive process remains unsettled, but the alcoholic cannot find much comfort in this section, as most experimenters find that alcohol in any per cent above 15, checks digestion to a marked degree.

The chapter upon dietetic cooking is excellent, as is also that upon mineral springs. Any physician can gain a good idea how to use mineral waters, with some degree of exactness, by studying these few pages : he will learn that we have as good, if not better, mineral springs in this country than our patients can find abroad. There are also some good suggestions concerning the use of medicinal agents, bitter tonics, and hydrochloric acid.

The third part of the book is taken up with a careful description with various forms of gastric disease, and their differential diagnosis. It brings the subject of disease of the stomach well up to date. The methods of diagnosis advised, and the instructions necessary to make such, presupposes a considerable amount of experience in gastric work. Treatment is directed both upon a scientific and a practical basis.

The book as a whole is well written. There is to be found in it a large amount of the writer's personal experience, and it is more interesting on this account. There are but few typographic and grammatic errors; in one or two places, for instance on page 101, in regard to locality, size and capacity of the stomach, the text is confusing. The illustrations are very good. At the close of many of the chapters is a complete bibliography upon the topic with which the chapter has dealt. This is of course of great service to those who are working upon cases of that character, and is extremely useful for reference for any one.

Every physician would be better for the reading of this work, though at times he will not find in the chapter which he consults sufficiently definite didactic statements as to which course is the best to pursue, but will have to make his own selection from the numerous authorities cited.

The American Year-Book of Medicine and Surgery : Being a Yearly Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery, Drawn from Journals, Monographs and Text-Books, of the Leading American and Foreign Authors and Investigators. Collected and Arranged with Critical Editorial Comments by Eminent American Specialists and Teachers under the General Editorial Charge of George M. Gould, M. D. Royal 8 vo. 1077 pages. W. B. Saunders, 925 Walnut Street, Philadelphia, 1898. Prices, cloth, $6.50 net ; half-morocco, $7.50 net.

The third volume of this magnificent work is equal in merit if not better than its predecessors. Three new departments have been added : 1. Physiologic Chemistry, under the charge of Prof. J. J. Abel, of Johns Hopkins Hospital ; 2. Public Hygiene and Preventive Medicine; by Dr. Samuel W. Abbott, Secretary of the Massachusetts State Board of Health; 3. Legal Medicine by Dr. Wyatt Johnson, of Montreal, Canada.

The great value of this monument of selective skill and industry lies in the careful collation of the most important medical facts and editorial opinions upon them by acknowledged authorities in their different departments. To keep conversant with

the literature of one's own specialty or hobby is a serious undertaking, but by personal reading to be well posted in the general literature of medicine is impossible. In the Year-Book it is all gathered and grouped into separate departments, the good separated from the bad, and the whole judicially criticised. To the physician who is desirous of being well informed in medical literature (and every one admires the scholar in medicine), as well as skilled in practice, the Year-Book is simply indispensable.

STUDIES IN THE PSYCHOLOGY OF SEX. VOL. I. ON SEXUAL INVERSION. By Havelock Ellis. London 1897. The University Press.

Mr. Ellis has been a student in this field for many years, and his work shows much industrious research and intelligent thought. The present volume considers sexual inversion, in both sexes, its nature, and the theories of its causation. The subject is a delicate one, and when handled by a less skilled hand than that of Mr. Ellis might digust rather than interest the reader. There is no doubt that the subject should be more widely discussed and carefully studied by medical men, instead of being put aside as a hopeless vice. If as the authorities tell us homosexuality is found among men of the highest intelligence and otherwise strictly moral nature, there is more to be said pro and con on the moral and legal aspect of the question than has heretofore been deemed admissible. To advanced students of psychology we recommend Mr. Ellis' book, but we are strongly against the popular dissemination of such literature. It is our honest belief that the chief medical use of another book of this sort, was the loaning of it to unnaturally inquisitive lay friends. It is to Mr. Ellis' credit that he is opposed to such usage.

ELEMENTS OF LATIN. FOR STUDENTS OF MEDICINE AND PHARMACY. By George D. Crothers, A. M., M. D., Teacher of Latin and Greek in the St. Joseph (Mo.) High School; formerly Professor of Latin and Greek in the University of Omaha; and Hiram H. Bice, A. M., Instructor of Latin and Greek in the Boys' High School of New York City. 5¼ x 7½ inches. Pages xii-142. Flexible Cloth, $1.25 net. The F. A. Davis Co., Publishers, 1914-16 Cherry Street, Philadelphia; 117 W. Forty-Second Street, New York City; 9 Lakeside Building, 218–20 S. Clark Street, Chicago, Ill.

In view of the importance of a comprehensive knowledge of Latin in the study of medicine, such a volume as this is of no little importance to the student. The book is designed to present within the briefest possible compass those principles of Latin etymology which are essential to an intelligent use of the terminology of pharmacy and medicine. It is unfortunate that the authors have adopted the English system of pronunciation. With the exception of this defect we find little in the book to criticise. In an appendix is given a valuable table of English, Latin, and Greek equivalents of important anatomic terms. The book is neatly printed in clear full type and attractively bound; and we heartily recommend it to students of medicine.

OUTLINES OF RURAL HYGIENE. FOR PHYSICIANS, STUDENTS AND SANITARIANS. By Harvey B. Bashore, M. D., Inspector for the State Board of Health of Pennsylyania. With an Appendix on The Normal Distribution of Chlorine, by Prof. Herbert E. Smith, of Yale University. Illustrated with twenty [20] engravings. 5½ x 8 inches. Pages vi-84. Extra cloth, 75 cents net. The F. A. Davis Co., Publishers, 1914-16 Cherry Street, Philadelphia; 117 W. Forty-Second Street, New York City; 9 Lakeside Building, 218-20 S. Clark Street, Chicago, Ill.

The object of this little book is to aid in the diffusal of sanitarian knowledge in rural districts, where it is much needed, and generally neglected. The author's ex-

perience in suburban and rural sanitary inspection qualifies him to speak practically on this subject. The book is plainly written, and contains valuable suggestions as to water supply, disposal of sewage and garbage, hygiene of habitation, construction of dwellings, school-houses, etc., and disposal of the dead. In addition there is a brief explanation of the dangers of infection through farm products, especially milk.

If the contents of this book were well understood by the country practitioner, it would not only save the rural population considerable distress and discomforts, but also the dwellers of cities, who depend upon the country for various farm products, milk, the water supply, etc.

The chapter upon "Habitation," contains much useful information regarding the hygienic selection of location for home, school and hospital; under "Soil," the author draws attention to surface soil, ground water, ground moisture and ground air. Under "Waste Disposal" he advises the separate deposition of all kinds of matter.

These subjects are treated practically and with authority, but the reviewer would suggest, in reference to the water supply having the water drain away, rather than return through a perforated sink to the cistern. Even with a filter it would be better to save at the pump, than run the risk of contamination, which might easily result from different farm yard animals using such a place as a drinking fountain.

The appendix contains a very good explanation of normal Na Cl found in ground water.

The book is well printed and appropriately illustrated.

MEDICAL NEWS AND MISCELLANY.

Dr. H. C. Wood, of Philadelphia, has assumed the editorship of the *American Medico-Surgical Bulletin*.

Mr. Frederick Treves has resigned the Lectureship on Surgery at the London Hospital, and has been succeeded by Mr. Mansell Moullin.

Archduke Karl Theodore, of Bavaria, who is well known as an ophthalmic surgeon of distinction, performed his 3000th operation for cataract on December 1, 1897, in his eye-hospital by the Alpine Lake Tegernse, in Upper Bavaria.

Mr. Gladstone is reported to be suffering from necrosis of the nasal bones, causing intense neuralgic pains.

The Bacillus of Trachoma.—The announcement is made that Dr. Leopold Muller, of the University of Vienna, has discovered the bacillus of trachoma.

Sir Richard Quain, Bart., Physician Extraordinary to her Majesty, President of the General Medical Council and editor of the "Dictionary of Medicine," is dead. He was born October 30, 1816, was a fellow of several learned societies and the author of numerous medical and scientific works.

The Monthly Cyclopædia of Practical Medicine, edited by Dr. C. E. de M. Sajous, is the title of a new medical journal issued instead of the *Universal Medical Journal*, as an adjunct to the improved *Annual of Universal Medical Sciences*.

Dr. John Moir, who is now 90 years of age, and who is the oldest Fellow of the Royal College of Physicians of Edinburgh, having been admitted in 1837, recently read a paper before the Edinburgh Obstetrical Society on "The Induction of Premature Labor," which is abstracted in this number of the INTERNATIONAL.

The British Medical Association.—The sixty-sixth annual meeting of the British Medical Association is to take place this year in Edinburgh, the president-elect being Sir Thomas Grainger Stewart, K. C. B., M. D., Edin. The meeting will commence on Tuesday, July 26, and terminate on Friday, July 29. An address in Medicine will be delivered by Professor Thomas Fraser, M. D., Edin.; one in Surgery by Professor Thomas Annandale, F. R. C. S., Edin.; and one in Physiological Medicine by Sir John Batty Tuke, M. D., Edin. There will be as many as sixteen sections, the subjects of Anatomy and Physiology being assigned to separate sections, and three departments not hitherto separately formed are constituted distinct sections—namely, Neurology, Medicine in Relation to Life Assurance, and Tropical Diseases.

American Academy of Medicine.—The announcement and preliminary program of the twenty-third annual meeting, to be held at Denver, Colorado, on Saturday, June 4, and Monday, June 6, 1898, has been issued. "The Physiologic Side of the Education of Youth" is the special theme suggested for the meeting.

The Medical Log of the Maine.—One of the first things recovered by the divers from the Maine, lying at the bottom of Havana harbor, was the journal of the medical officers. The package was under water four days. The blue-mark lines ruled on the paper at the government printing-office are nearly faded out, but the writing in the journal in the ink used by the navy is clear and distinct. Surgeon Heneberger, the Maine's medical officer, had brought the record up to the last moments before the wreck of the ship, the last entry being February 15.

An American Philanthropist.—The first list of annual subscriptions to the second year of the Prince of Wales's Hospital Fund includes one of 1000 guineas from the Hon. William Waldorf Astor.

Russian Medical School for Women.—The newly-established medical school for women, at St. Petersburg, recently opened with 165 students.

The University of Zurich has 713 students, of whom as many as 333 are foreigners. 135 of these are from Russia. There are more women than men in the medical department.

An Expensive Drunkard.—Pellman, of the University of Bonn, tells of a notorious drunkard who died in 1800. Her descendants numbered 834 and 709 of them have been traced. Of these, 7 were convicted of murder, 76 of other crimes, 142 were professional beggars, 64 lived on charity, and 181 women of the family were prostitutes. This single family cost the German government, through its courts, almshouses and prisons, no less than $1,250,000.—"Medical and Surgical Reporter."

An Appropriate Position.—According to "Le Progrès médical," there lives in the town of Oran a man by the name of Trémouillet, aged 126 years, having been born in 1771. He was captured in 1789 by pirates, and lived a long time the life of an Arab. Since 1831, he has returned to civilized life, and is a prominent citizen of Oran. Curious to relate, he is Health Officer—a most appropriate position for such a nestor.

An Operation on Sarah Bernhardt.—Dr. Samuel Pozzi, of Paris, operated on February 16 upon Mme. Sarah Bernhardt, the French actress, for the removal of an intraligamentary cyst. The operation is reported to have been successful.

Proprietary Medicines.—In 217,000 prescriptions written in Chicago, Philadelphia, New York, Boston, Washington, Baltimore, Denver, San Francisco, New Orleans and St. Louis, 11.25 per cent. were proprietary articles.

Diet in the Gastro-Intestinal Catarrhs.—Dr. Boardman Reed discussed this important subject in a paper which was presented to the Section of Physiology and Dietetics of the American Medical Association last June, and was published in the journal of the Association February 19. The author summarizes the advantages and disadvantages of the various special forms of diet which have been advocated for the catarrhs of the

digestive tube—the diet of vegetables and fruits, the milk diet, and the diet of meat and hot water, as well as a somewhat restricted mixed diet—and while he has found a limitation of such patients to lean meat with a very small amount of stale bread or toast and a little lettuce, celery, etc., to be often followed by brilliant results, he points out that it cannot be long continued without serious danger to nutrition. Then, there are important contraindications, and he agrees with Hemmeter that a marked excess of the hydrochloric acid secretion is one of them. Dr. Reed emphasizes the necessity of studying each case by itself, and selecting for it a diet appropriate to the special conditions existing, which include the localization of the catarrhal process and degree of activity of the secretion of the various digestive ferments.

Electrocution and What Causes Electrical Death. ("The American X-Ray Journal," December, 1897.) By Homer C. Bennett, M. D.

The chair used is made of oak, about three feet wide, and about two and a half feet deep, and from the bottom of the seat to the top of the head rest is about three and a half feet. The seat is of perforated wood and the head-rest is so adjusted, somewhat after the manner of a dentist's chair, as to be raised or lowered, and it has a padded front which can be forced forward by means of a thumb-screw after the face-strap is adjusted, thus making the head immovable without being painful. The subject is seated in the chair and held there firmly by means of thick straps of yellow leather, about three inches wide, one around each wrist, one around each arm just above the elbow, one around the body just above the hips, one around each ankle and one across the whole face and around the head. This last one is made of soft black calfskin, and consists of two pieces, each about four inches wide at the widest part, just meeting at the middle, but lapping over each other at the sides of the head, thus making a sort of diamond-shaped bandage with a concave surface which fits over the face, leaving a small opening for the tip of the nose to project, thus allowing the subject to breathe. This strap answers the double purpose of a strap with which to secure the head and also as a mask.

Each ankle fits into a semi-circular notch in each side of a cross-piece at the bottom of the chair. These notches are covered with russet leather and studded with brass tacks to which the ankle straps are attached. When a man is strapped in this chair he can move nothing but his knees, and them only from side to side. The contacts are made by means of two electrodes, one of which is applied to the outer side of the right leg at about the junction of the upper and middle third, and is held in place by means of a light strap around the calf. The other electrode is applied to the vertex by means of a long black strap which passes down over the temples and cheeks and under the chin.

In describing the first electrocution in the Ohio Penitentiary, April 21st, 1897, the writer says:

Everything being in readiness, the condemned men were led in, one at a time, and strapped securely to the chair, and the electrodes adjusted after being well wetted with a solution of sal-ammoniac, and the current was turned on.

When the switch was thrown by the Warden, which completed the circuit through the body, there was a sudden tetanic contraction of every muscle in the body, so that every strap was put under strong tension until they creaked with the strain. With the contraction of the diaphragm there was a short, spasmodic, inhalatory gasp, which was undoubtedly entirely involuntary and automatic, otherwise there was not a sound audible except the creaking of the straps to show that a human being was being put to death. As soon as the current was turned off there was, of course, a relaxation of the tetanus of the entire muscular system. This was repeated again and again, about three seconds duration each time, till three such shocks had been given, when the man was pronounced "dead," although death had probably occurred before the first charge had been turned off, and the consequent contractions and relaxations and gasps, were but such as were known to follow the application of electricity to dead muscle, as was previously tried on the bodies of a horse and dog.

The current used was the alternating dynamic form, with a tension of 1,700 volts in the first case, and 2,000 volts in the second, an amperage in both cases of 7½ amperes, and alternations of 16,000 per minute. The only visible signs of the deadly work of the current were slight blisters on the legs of both men, due to the current heating the water in the sponge, and the hair of the head where the wet sponge rested was hot for the same reason, but not burned or singed at all.

Extraordinary Case of Stone-Swallowing. ("Birmingham Medica Review," November, 1897, 300.) By Carter and Greenwood.

The patient was a man, aged 24, who passed under the stage name of "The Human Ostrich." He was admitted to Queen's Hospital, September 29th, 1897, complaining of severe pains in the abdomen and vertigo. His mother had lived to be 74 years of age, and his father died at 94. Both had earned their living by stone-swallowing. The patient had four brothers and five sisters, alive and healthy, one of the brothers being a professional stone-swallower. The patient himself was accustomed to give a number of performances daily, and at each performance he is careful not to take more than about a handful of pebbles. In selecting his stones he avoids all cornered ones, preferring, if possible, to obtain oval smooth stones, averaging in section, about the size of a half-penny. Within 24 hours he is able to take about 8 pounds of stones, and is careful not to go beyond this limit. At each performance he further swallows pieces of brick and glass, both of which he masticates before swallowing. Occasionally he varies his program by giving exhibitions of watch- and sword-swallowing. For the latter trick he uses a straight twenty-four-inch sword; while it is down in the esophagus he fires off a revolver or

balances a 28 pound weight on the hilt. Before passing the sword he shifts the larynx bodily to the left side of his neck, apparently beneath the sterno-mastoid muscle, so that the gullet can be distinctly felt from the front, and leaves a straight course for the sword. In swallowing a watch he selects a lady's watch and pulls it back by means of a string or chain attached to the ring. The stones and other articles which he swallows are passed daily per rectum, and, as a rule, without the least inconvenience. He does not remember when he first learnt his performance, having been trained to it from earliest childhood. He states that he once tried to train another person to do the same tricks, but the results were disastrous, and soon ended in an operation for intestinal obstruction. He takes an extremely regular and moderate diet, which he never varies: thus, his breakfast consisted of two eggs (swallowed whole, minus the shell), together with "two-pennyworth" of brandy, and a pint and a half of milk. As a rule he takes nothing for dinner, or if he does have anything it is a little porridge, milk pudding, or bread and butter with milk. On examination, the patient was well-developed and healthy in appearance. His tongue was slightly coated. The abdomen was lax; and on succussion, sounds could be distinctly heard, which the patient attributed to the knocking together of the stones inside him; and he was accustomed to demonstrate this to his audience after a performance as a guarantee of good faith. There was marked tenderness with some increased resistance at about McBurney's point. There was nothing abnormal in his heart and lungs.

He remained in hospital for about four days, and then had to leave to look after business matters. While in bed he complained of occasional attacks of severe colicky pain, but in the intervals was quite comfortable. An enema was given with a very good result, and after that he was much easier, and the tenderness moved from the cecal area to the lower epigastric region. Whilst in hospital he passed no stones in the stools, although he had swallowed a large number on the day previous to his admission. With an idea of testing the Roentgen's rays on the case, a skiagraph was taken, but it was not successful inasmuch as the patient was too nervous to keep still. It is worthy of note that, despite his extraordinary habits, he enjoyed very good health, stating that he had never previously been ill in his life. Further, that although he took quite sufficient food for a practically sedentary life, it was quite inadequate to allow of any manual work. Thus he stated that if he attempted to work in any form with his hands he was very soon tired and had to give it up.

Dr. Carter's opinion was that at the time of his admission one or more stones had become impacted at the ileo-cecal valve, setting up slight local peritonitis; and that the enema having dislodged the obstruction in that quarter, the onward passage had again been delayed in the transverse colon.

The Choice of a Tobacco Pipe. ("Lancet," Dec. 4, 1897.)

If tobacco-smoking is justifiable at all on hygienic grounds it is generally conceded that the pipe is the least injurious means. But tobacco-pipes differ considerably in material and shapes, both of which must be important factors in determining the character of the smoke. Thus there is the clay, the meerschaum, and the various wooden pipes, the briar, cherry, or myall. Next to the tobacco therefore, which should always be pure and free from added flavoring, an expedient which is resorted to far too commonly nowadays, probably in many instances to cover an inferior quality of tobacco, the best kind of pipe is a point to be considered. Even assuming that he is smoking good tobacco the smoker knows how different in character the smoke is when drawn from a clay or a wooden bowl. There is probably a scientific explanation of this fact which must have some bearing on the noxious or innocuous character of the smoke associated with other products of combustion. A soft clay is invariably cool smoking because the acrid oils obtained on the destructive distillation of the tobacco are absorbed instead of collecting in a little pool, which must eventually either by the volatization or by mechanical conveyance reach the mouth. A particular pipe "smokes hot" not necessarily because the temperature of the smoke is high but because it favors the passage by one of these means of the oils into the mouth. Meerschaum is another porous material. Again, an old wooden pipe or briar, so dear to inveterate smokers, becomes "smooth smoking" because the pores of the wood widen and so absorb, as is the case with clay and meerschaum, a large proportion of the tobacco oils. Thus an old pipe "sweats" as it is termed—that is, the oil intrudes into the expanded pores of the wooden bowl and at length exudes. Similarly, a hook-shaped pipe must be better than a pipe the bowl of which is on the same level as the mouth, for the simple reason that in the former a considerable quantity of the oil is kept back in the U-shaped part of the pipe while in the latter the oil travels easily down the stem. Ebonite stems are in general objectionable because they commonly spoil the true flavor of tobacco-smoke. This is most probably due to sulphur of the ebonite combining with the volatile oils in the smoke. We know instances where ebonite stems have produced distinctly objectionable symptoms in the throat most probably for the reason just given. Bone or real amber makes a much more satisfactory stem or the pipes should be of wood throughout. Amber substitutes, and especially celluloid, should be discarded entirely as dangerous, while the flavor of camphor which these invariably communicate to the smoke forms a very unpleasant combination. Pipes of special construction cannot be regarded with much favor, such as those which are said to be hygienic and usually contain a so-called nicotine-absorber. Those smokers who require such auxiliary attachments had better not smoke at all. As a matter of fact tobacco yields little nicotine in the smoke produced on its partial combustion; it is mainly to oils of a tarry and acrid character that the toxic symptoms of tobacco-smoking are due.

A Case of Mistaken Sex. Nature has certainly her humorous moods, and these are in no sense so well shown as when she makes a hopeless mixture of the genital organs of the two sexes in some unfortunate individual. The differentiation, of course, of such organs in the normal state is perfect in its way; we are not aware of any mistakes that have arisen under these circumstances. But it need scarcely be said that real difficulties arise in the determination of the sex when Nature endows a man, say, with rudimentary organs proper to his sex, but so masks their appearance as to deceive even himself and others into believing that he is a woman. A curious case of this kind is recorded by Mr. G. R. Green of Ripon, in the current number of the *Quarterly Medical Journal*. A housemaid, æt. 24, consulted him with symptoms which seemed to point to retained menses. She was five feet seven inches in height, of dark complexion, and anemic in appearance. For several years she had been in domestic service, and was well known to Mr. Green personally. On examination, the external genitals appeared to be those of a woman; in keeping with this was the arrangement of the pubic hair, while there was in addition considerable mammary development. There was an oval body, freely movable, in the right labium, and a similar one in the left. On separating the labia a clitoris was found, rather larger than usual. Below this was a small opening, which apparently led to a narrow and contracted vagina. Subsequent examination, however, under ether, revealed a very different state of things. The "swellings" in the labia proved to be testes; the labia were formed by a splitting of the scrotum into two halves. At the bottom of the "split" the "clitoris" was clearly the penis, with its glans only developed, and without the corpus spongiosum. Upon its under-surface there was a groove which led backwards to a urethral orifice, into which a silver female catheter easily passed into the bladder. The sex of this "housemaid" was evidently, therefore that of a male, and the question arose what was to be done under the circumstances. The patient was anxious to continue being a woman, but the law does not allow a man to masquerade in woman's clothes. Mr. Green determined that the difficulty would be met if he were to remove the testicles from the "labia." This was accordingly successfully done, and now, in his unsexed condition, the man has resumed his ordinary occupation of that of a "housemaid."—*Medical Press and Circular.*

New York in 1998.—Mr. George E. Waring, Jr., the very capable head of the New York Department of Street Cleaning, was pleased some time ago to forecast the conditions that are likely to rule in Greater New York a century hence. *Municipal Affairs* for December republishes the prophecy of this experienced engineer. Mr. Waring predicts a population for greater New York in 1998 of 20,000,000 and the concerns himself chiefly with the engineering problems that will con-

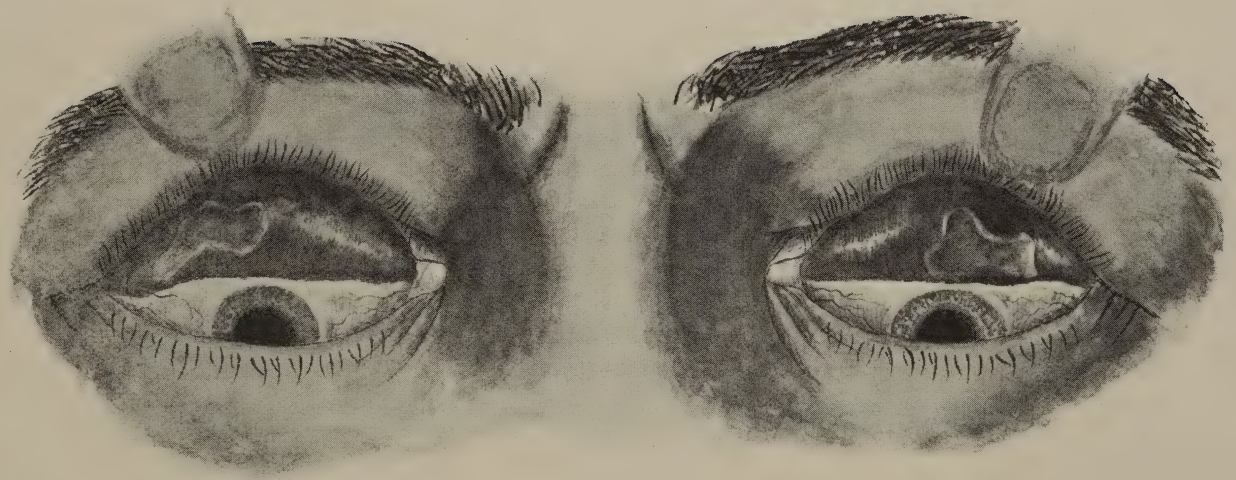
front such a vast aggregation of people. Horses, he thinks, will no longer be seen upon the streets. Electricity will do all the work of lighting, heating and transportation. Automobile carriages and trucks will entirely supplant the vehicles of to-day. This will relieve the street cleaning department of the heaviest part of its work.

The sewage of a city of 20,000,000 poured into New York Bay, Mr. Waring says, would make it a cesspool and foul both shores of Long Island and the entire Hudson River. The water supply, if it is used as at present, would have to be forced in prodigious volumes from Lake Ontario. Mr. Waring thinks, however, that the sewage will not be poured into the bay, and that much less water per capita will be needed one hundred years hence. He suggests that the public authorities at the end of the next century will furnish to the people not water but compressed air; that the sewage flowing from every house will be purified in filters aerated by air under pressure, and by the same pressure forced to reservoirs in the tops of the houses, from which it will flow to be used again.

With the sewage, the water and street cleaning problems thus greatly simplified, with all domestic animals banished from the city, with wood and coal no longer used as fuel, and smoke and ashes no longer to be reckoned with, the difficulty of keeping a city of 20,000,000 people in a sound hygenic condition ought not to be insuperable. Mr. Waring predicts that in 1998 Manhattan will be abandoned as a place of residence and be devoted to buildings of the sky-scraping variety. Staten Island will be given over to shipping and unsavory industries. The western side of the harbor below Jersey City will be filled with docks, warehouses and railroad terminals. Long Island, West Chester County, and the northeastern part of New Jersey will become one vast residence region, save for the manufacturing centers which will be established in favorable localities. The tenement house will be unknown and no man, rich or poor, will live in a house of which every room does not open freely to the outer air.—*Exchange.*

Healthfulness of Tunnels.—The astonishing statement is made in London that the health of employes on the Underground Railway is better than on any line in England. The atmosphere is said to have positively cured cases of quinsy and bronchitis and to have benefited people with lung troubles.

Celtic Wit.—An Irish brakeman in the railroad yards was hurt by the train and his friends offered to send for a physician. They asked: "Do you want an allopath or homeopath?" He replied: "It don't matter—all paths lead to the grave."—*Exchange.*



A Case of Bilateral Syphilitic Ulceration of the Palpebral Conjunctiva.

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ORIGINAL COMMUNICATIONS.

A CASE OF BILATERAL SYPHILITIC ULCERATION OF THE PALPEBRAL CONJUNCTIVA.*

By Clarence A. Veasey, A. M., M. D.,

Adjunct Professor of Diseases of the Eye, Philadelphia Polyclinic; Demonstrator of Ophthalmology in the Jefferson Medical College.

O. L., aged twenty-eight years, a male, presented himself at the ophthalmic dispensary of the Jefferson Medical College Hospital (service of Dr. de Schweinitz) in the latter part of April, 1897, for the treatment of the following ocular condition : Each upper lip was markedly swollen and intensely red near the ciliary margin, the tarsi were thicker, harder and less pliable than normal, and the eyeballs were bathed in a thin muco-purulent discharge. After the latter had been washed away the corneæ were found to be normal, and the conjunctivæ of the lower lids and of the eye-balls somewhat injected. Upon everting the lids there were found symmetrically situated on the external halves of the palpebral conjunctivæ two extensive, irregularly outlined phagedenic ulcers. These extended from near the centre of the everted portions of the palpebral conjunctivæ in the direction of the external angles for about twelve to sixteen millimeters, measuring from edge to edge, the one on the right side being slightly the longer; the width varied, the widest portion of the right being seven millimeters, of the left, ten millimeters, again measuring between the edges. The edges, however, were everywhere extensively undermined, in some places the depth of the sulcus so formed being half a centimeter, and nowhere being less than two and a half millimeters. In depth, the ulcers extended to the tarsi, but the latter were not involved

*Read in the Section on Ophthalmology of the College of Physicians of Philadelphia, January 18, 1898.

in the process at any point. The surfaces were covered with a grayish-yellow slough, and so strong was the resemblance to phagedenic chancroid that had the ulcers been seen upon the generative organs, I believe one would scarcely have hesitated to have pronounced them as such.

The patient confessed to having acquired the initital lesion of syphilis seven months before our examination was made, and at the time of the examination there was a papular eruption of the body and limbs, and numerous mucous patches in the mouth. He was referred to the genito-urinary department, where he was placed upon rapidly increasing doses of protiodide of mercury. The local treatment of the ulcers consisted in frequent cleansings with a solution of formaldehyde and an occasional stimulation with a solution of nitrate of silver. At the expiration of two months the ulcers had entirely healed, leaving only slight scars and no distortion of the lids. The skin-eruption and the mucous patches had also disappeared.

A CASE OF LACERATED WOUND OF THE CORNEA.

By C. J Kisler, M. D.

House Surgeon, Wills' Hospital, Philadelphia.

On December 23d, 1897, Thomas M. G. was admitted to the clinic of Dr. John Welsh Croskey, at the Philadelphia Wills Hospital, with the following history:

Three weeks ago he was struck in the right eye by a piece of coal. The injury was immediately followed by a gush of fluid and total blindness in the right eye. He was treated in a State Hospital with the usual palliatives, ice and atropia, but without relief, and he was sent to Wills Hospital. On admission, there was found a ragged laceration of the cornea, extending at an angle of 150 degrees almost across the upper fourth of the cornea, and projecting into the conjunctivæ at its inner extremity. The iris was incarcerated in almost the entire extent of the wound and intensely injected, and there was a constant leakage of aqueous. The lens was much swollen and almost completely opaque. The tension was minus. There was considerable pain, tenderness and ciliary injection.

After thorough cleansing and cocainization an incision was made with a Graefe knife as in a typical lens-extraction. The inner extremity of the wound joined the inner end of the laceration, and endangered the nutrition of the intervening corneal tissue. But this lesser of evils was disregarded in the face of the critical condition of the eye. The iris was then separated from its attachment to the cornea, and was excised—leaving healthy pillars to the large coloboma.

The lens was then removed almost in its entirety, and it resembled a mass of dense gelatin. After thorough flushing and instillation of atropia

the eye was closed. Very little reaction and no pain followed the operation.

Both corneal wounds healed within 48 hours, and all the inflammatory conditions subsided at once. The recovery was uneventful. There was a high degree of irregular corneal astigmatism which prevented the vision from increasing above finger-counting at six feet. The eye was perfectly quiet and healthy when the patient was discharged. It is interesting to note that, after the palliative and more usual measures had failed even to relieve the eye, it promptly and completely responded to the more radical treatment—removal of the sources of irritation in its anterior segment.

THE FREQUENCY OF EXOPHTHALMIC GOITRE AND ITS FREQUENCY IN THE SEXES.

By H. A. Hare, M. D.,

Professor of Therapeutics in the Jefferson Medical College of Philadelphia.

The fact that I found no less than seven cases of true exophthalmic goitre among the histories of 63 cases which I had taken before my clinic in the Jefferson Hospital, called my attention to its frequency, and I have looked into the matter, therefore, with some interest to discover, first, how far this proportion is in excess of the ordinary run of cases. The 63 cases named were, of course, selected, and, goitre being an unusual disease, were naturally set aside, with other interesting cases, when it presented itself.

An examination of some hospital records in this city shows that in the Jefferson Medical College Hospital, in 10,603 cases, the number of cases was 11, or 1 in 964. In the University of Pennsylvania Hospital out of 35,076 cases there were 48 cases, or 1 in 751. In other words, the disease occurred in the proportion of 59 cases in 45,679 individuals, or 1 in 774.

The question of relative frequency in the sexes is also of interest. In his valuable paper on this subject, contributed to the Twentieth Century Practice of Medicine, Vol. IV., Murray states that out of 400 cases of this disease, seen by himself and other authors, 43 were males and 357 females, or a proportion of 1 to 8.3. Tyson, in his "Practice," states that he cannot remember having seen the disease more than once in the male. Of the seven selected cases, as occurring in my hospital service already named, no less than 3 were males. In the 30 cases collected by L. F. Bryson there were 8 males and 22 women. In Eshner's graduation thesis, in 1888, he collected 227 cases, of which no less than 42 occurred in males.

Ord and Mackenzie, in "Allbutt's System of Medicine," state that

as the disease is more rare in males it is more noteworthy, and, therefore, think that in Buschan's statistics the proportion of males is too high. They also express the belief that in some countries it would seem probable that the proportion is greater or less, and quote Charcot as stating that the disease may be only a little less frequent in men than in women. Out of a hundred cases seen by Ord and Mackenzie there were only five males. In Putnam's cases there were 32 cases, of which 23 were women and 9 men. In other words, out of 1839 cases there were 286 males and 1553 females, or a proportion of about 1 to 6. In the last 478 cases seen in my office there were 2 cases of exophthalmic goitre, both in females.

Fagge, in his work on Practice, quotes Eulenberg, in Ziemssen's Cyclopedia, as placing the proportion of females to males as 2 to 1; Trousseau places it at 50 to 8. Osler says the disease is rare in man, and Gowers states the ratio to be 5 to 1. Eshner, who has courteously aided me with certain references, states that in a period of about ten years he has seen, he thinks, some 50 or 60 cases, and not more than three or four were in males. Strümpell makes no statement of figures, merely saying that the disease is plainly one of the female sex. Henry, in Flint's "Practice," speaks of a fatal case of the disease made memorable by the fact that it was a male. In the "System of Medicine" edited by Pepper, Dr. D. Hayes Agnew states that while the proportion is 2 to 1 according to some writers this is far too high, and he says that out of 20 cases seen by him only one was in a male. By far the largest series of cases collected by any one writer on this topic is that of Buschan, who gathered 980 cases, of which 805 were females and 175 males, or a proportion of 9 to 2.

The following history is of interest as indicating the marked hereditary and neuropathic character of the disease:

M. H., a girl of 16, presented herself at the Jefferson Hospital with the following history: She had never menstruated, and when a little over 15 years of age, or nine months before admission, had noticed a swelling of the thyroid. The eyes protruded, and dyspnea and headache came on, but she asserted that there was no vertigo, and, still more remarkable, no palpitation. She was nervous, but there was no tremor. The heart was normal. Her feet were sometimes swollen and at times there was nocturnal incontinence. The left lobe of the gland was chiefly enlarged. There was a murmer over the thyroid and carotid arteries; her mother suffered from an enlarged thyroid after the birth of the first child, and it increased in size with each pregnancy. The aunt and great aunt had an enlarged thryoid, likewise the grandmother of the child and the great grandmother all had exophthalmic goitre. Three sisters of this child's mother and their children escaped.

In this connection the case recorded by Oesterreicher is of interest for in this instance a woman with the disease had 10 children, of whom 8 had exophthalmic goitre and one of them had 3 children so affected.

A very useful bibliography of selected literature on this disease will be found in the 4th volume of "Allbutt's System," covering seven pages.

A CONTRIBUTION TO THE STATISTICS OF EXOPHTHALMIC GOITRE.

By Augustus A. Eshner, M. D.,

Professor of Clinical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital, etc.

In an analysis of 227 cases of exophthalmic goitre, collected from the literature in the preparation of an essay on that disorder, and which, in abridged form, was published in the "Philadelphia Polyclinic" for 1888, I found that 185 cases occurred in females and 42 in males, a proportion of 4.4 to 1. Of the former, the oldest patient was 68 years old[1], the youngest 9[2] (one case was cited as having occurred in a girl 2½ years old); of the males the oldest was 66[3], the youngest 16.[4]

The average age of all the cases was between 30 and 31 (in 212 of the cases it was 30.33 years; in females 30.25, in males 31). These figures, in so far as they can be compared, correspond fairly with those given by Bailey,[5] who found among 231 cases, 197 in females and 34 in males, a proportion of 5.8 to 1. The average age in 55 cases was 27.7 years; the average in males 32.5. I have not thrown these two sets of figures together, as I suspect that they were largely derived from similar sources.

I have gone over my original notes to determine the age-distribution of the cases and tabulate herewith the results:

Quinquennial Period.	*Sex.*		
	Female.	*Male.*	*Total.*
Between 5 and 9 years	2	0	2
" 10 " 14 "	7	0	7
" 15 " 19 "	21	3	24
" 20 " 24 "	31	5	36
" 25 " 29 "	17	10	27
" 30 " 34 "	20	6	26
" 35 " 39 "	11	6	17
" 40 " 44 "	12	1	13
" 45 " 49 "	9	3	12
" 50 " 54 "	8	2	10
" 55 " 59 "	3	0	3
" 60 " 64 "	1	0	1
" 65 " 69 "	1	1	2
Age not stated	18	2	20
	161	39	200

Remarks in Discussion Before the Section on General Medicine of the College of Physicians of Philadelphia, February 14, 1898.

1—G. B. Gillespie, *Mississippi Valley Medical Monthly*, January, 1886, p. 28.
2—A. Jacobi, *Medical Record*, July 5, 1879, p. 1.
3—F. Oesterreicher, *Wiener medizin Presse*, March 16, 1884, p. 336.
4—E. Jendrassik, *Archiv f. Psychiatrie*, 1886, B. xxvii, H. 2, p. 301.
5—Bailey, *Buffalo Medical and Surgical Journal*, August, 1886, p. 9.

As may be seen, the largest number of cases (36) in any quinquennial period occurred between 20 and 24, the next largest (27) between 25 and 29 ; then follows the period between 30 and 34 with 26 cases, and, next, that between 15 and 19 with 24 cases. The 20 years from 15 to 34 include thus 56.5 per cent. (113) of all the cases. The distribution in each sex differs slightly from the foregoing. In females the largest each side differs slightly from the foregoing. In females the largest and 24, the next largest number (21) between 15 and 19 ; then follows the period between 30 and 34 with 20 cases, and, next, between 25 and 29 with 17 cases. The twenty years from 15 to 34 include 89 of the 116 cases in females (55.3 per cent.). The distribution among males is slightly different, the largest number (10) in any period occurring between 25 and 29, the next largest (6 each) between 30 and 34 and between 35 and 39; 5 cases occurred between 20 and 24; 27 of 39 cases in males (69.2 per cent.) occurred thus between 20 and 39. The disease appears, from these figures, to develop later in males than in females. Some little liberty has been taken in the use of the word " occurrence " as it is here employed, as the years given are mostly those at which the cases were recorded, so that the period of prevalence would, therefore, be actually a little earlier than I have stated.

I have recently taken occasion to go over the records of the Orthopedic Hospital and Infirmary for Nervous Diseases in the hope of gaining some information as to the further progress and the duration of the disease in the cases of exophthalmic goitre that there came under observation, but, from failure to reach more than an inconsiderable number, I am unable to formulate any conclusion upon these points. In connection with the subject in hand, it may not be uninteresting to note that in the annual report of the Hospital from 1886 to 1897, inclusive, there is recorded the reception at the dispensary for nervous diseases a total of 7270 cases, including 30 of exophthalmic goitre, and into the wards of the hospital 2414 cases, including 5 cases of exophthalmic goitre. (At least one of the 35 cases is included in both sets of figures, and it is certain that some of the whole number of 9684 cases are duplicated, having been both seen in the dispensary and admitted to the wards.)

Of 28 cases of exophthalmic goitre, recorded on the books between 1871 and March, 1897, that I have been able to analyze upon this point, 25 occurred in females and 3 in males. Of this number, but one, so far as I know, occurred in a colored person, and this patient, a woman, was not a full black. I am told, however, that another case in a black woman came under observation during the latter part of 1897.

Of the 200 cases that I have tabulated, in but two is it stated that the patient was a colored person. One of these occurred in a full-blooded black girl, 12 years old,[1] the other in a colored man of 35.[2]

From the foregoing considerations I should formulate the following conclusions :

1—F. K. Bailey, *Medical and Surgical Reporter*, April 2, 1870 ; p. 270.

2—G. F. Denny, *Northwestern Lancet*, December 15, 1885 ; p. 102.

That exopthalmic goitre occurs approximately 4.5 times as often in females as in males, among all people ;

That the disease is most common during the period of active adult life, occurring earlier in females than in males ;

That the disease is uncommon, if not rare, in the black race.

AMOEBA COLI AND ACUTE CYSTITIS.

By Allen J. Smith, *Profesor of Pathology*, and L. E. Magnenat, *Demonstrator of Normal Histology, in the Medical Department of the University of Texas, Galveston, Texas.*

Under the name "Amoeba Urogenitalis," Baelz described amoebae which he found in the bloody and purulent urine of a young female, who presented evidence of tuberculosis of the lungs and genito-urinary organs, about fifty micromillimeters in diameter, rounded, finely granular and usually showing a large vesicular nucleus. They also occurred in the vaginal secretions. While suspecting the identity of these bodies with Loesch's amoeba coli, the author preferred, because of the unusual situation of the parasites and certain slight differences in size and appearance from those of the amoeba coli as described by Loesch, to regard his specimens as of a separate variety and applied a distinctive name. In 1889 Jürgens reported the discovery of amoebae in the urine of a male before the Society for Internal Medicine, of Berlin ;[2] and Kartulis[3] and Posner[4] likewise describe the occurrence of amoebae in the urine in connection with the inflammatory vesical affections. References to similar cases occur in the abstract in the *American Journal of American Sciences.* April, 1897, reporting the observation of amoebiform bodies in the urine of a case of painless hematuria by Zeehuisen,[5] and the discovery of amoebae identical with amoeba coli in the bloody and purulent urine of a female suffering from paroxysmal attacks resembling strangury or renal colic, by Wijnhoff.[6]

The following case was admitted to Sealy Hospital on June 10,1896, the patient apparently suffering from a severe attack of acute cystitis with urinary retention, and consequently was placed in the surgical wards. The day following the interne in charge, Dr. Short, sent to the pathological laboratory a sample of urine obtained an hour or two previously by catheterization, and it was examined by one of the writers, who discovered a number of amoebiform, granular bodies in the sediment,

1—*Berlin klin. Woch., 1883*, p. 237.
2—*Berlin klin. Woch.*, 1889.
3—*Zeitschr f. Hygiene u Infectionskrankheiten*,xiii, p. 2 ; 1893.
4—*Berlin klin. Wochenschr.*, xxx, p. 674 ; 1893.
5—*Bentralblatt fur innere Medicin*, 1896, No. 252.
6—*Nederl. Tijdschr. u. Geneeskunde*, 1895, iii, p. 107.

and detected, in at least one individual, distinct amoeboid movement. This was reported and at once attracted attention to the intestinal condition, which, in spite of considerable griping pain, had until then been but lightly regarded ; and the following morning, in a mucous mass passed from the bowel, the writer found large numbers of the ordinary dysenteric amoeba, as well as a number of clearly moving amoebae in the urine. The bodies in the urine presented the same general characteristics as those in the feces, but were almost uniformly smaller, only occasionally measuring above 30 micromillimeters in diameter, whereas those in the intestinal discharge, in many instances, were more than fifty micromillimeters in their long diameter. The parasites from both situations exhibited a slow movement; the pseudopods were often lobosely branched and more numerous than commonly seen in the amoeba of dysentery or in the common non-pathogenic form of amoeba coli. There were not sufficient differences however to permit one to suspect the parasites as being of different varieties, and their granular interior with clear marginal zone, vacuolation and occasional nucleation and size make it improbable that they were any other than the dysenteric type of the amoeba coli. So, too, the history of the case argues this form of the organism. Aside from the mere presence of the amoebae in such large numbers in such an unusual situation, the relationship of the inflammatory condition of the vesical mucous membrane is of interest, the inflammation improving coincidently with the disappearance of the parasites.

The following is an epitome of the history notes : E. W. H., male, white, aet. 53 years, married, a painter, with good family history, has been in excellent health since youth, aside from an attack of rheumatism five or six years ago, and excepting, too, a number of more or less serious injuries accidentally received in working at his trade. In 1894, while living in New Orleans, he was one day seized with intense cramps, and, although in the street at the time, was unable to restrain his bowels and passed their contents in his clothes. For two or three days there persisted a severe diarrhea, unaccompanied by other symptoms. Since then there have been two similar attacks here in Galveston prior to the present illness. The patient has resided in this city since June, 1895, and has worked almost continuously at his trade. With the exception of the two attacks referred to, he was well until twelve days before his admission to the hospital, when one morning he was suddenly seized with colicky pains of an intense character, compelled to abandon his work and repair to the closet, where he had a large liquid passage accompanied by a great deal of tenesmus and resulting in the protrusion of several inches of the rectum. The latter was returned by the patient with considerable difficulty. While in the closet Mr. H. for the first time experienced serious trouble in voiding his urine, and only accomplished it after bending forward and resting on all fours. The remainder of the day was spent in bed. The pains increasing toward night, the bladder becoming distended, the patient unable to urinate, and considerable fever coming on, a physician was called, who relieved the distended bladder

by catheterization and who prescribed some remedy for the intestinal condition. During the night the urine was voided involuntarily. The following day (May 30) the patient spent in bed. The bowels were very loose, but not as painful as on the previous day ; towards night a physician was called to catheterize him and relieve the vesical tension. On May 31 the man was able to leave his bed, and upon the advice of his physician purchased a soft rubber catheter and was instructed in its use. Since then he has carried it constantly in his pocket, using it as it became necessary. From the 1st to the 10th of June he was apparently in good health, save that he was unable to pass urine without the aid of a catheter. The diarrhea had ceased and given place to a slight constipation. Upon application for admission he did not refer to the intestinal disturbances, and entered the hospital in the hope of relief from the vesical symptoms.

The patient remained in the wards for about three weeks under active treatment by irrigation of the bladder with solution of permanganate of potassium, and of the lower bowel with solutions of quinin and of permanganate. At the close of this time all symptoms of inflammation of the bladder and of the bowel had subsided, and there have been no attacks since, the man having in the meantime been continuously occupied with his usual labors.

In addition to the above case, the writers have encountered within the last two years at least three instances of urinary disturbances associated with the presence in the urine of motionless amoebiform bodies, but without intestinal complications. One of these was a case of painless hematuria, which occurred without appreciated cause, and which subsided gradually under the internal administration of thymol. Another was a case of severe chronic cystitis following vesical infection during the puerpural period, which has continued with but little relief for about six years, in spite of constant treatment. The third was a case of chronic cystitis in an old man, supposed to have arisen in connection with an enlarged prostate, and complicated by a chronic interstitial nephritis from which the patient eventually died. In all of these cases the bodies were motionless and apparently represented the resting stage of the amoeba; in many individual instances the supposed parasites presented a ring shape. Special efforts to find active bodies in each case were made without success, but the writers are confident from the general appearances of the cells of their parasitic nature. In size they were uniformly smaller than the ordinary amoeba of disentery, and probably were not of the same variety, or perhaps represented the resting stage of infusoria.

REVIEW OF MEDICINE.

MEDICINE.

Amoebae in Dysentery and Enteritis. (*Munchener med. Woch.*, Jan. 11, 1898.) By Friedrich Roemer.

The author has examined the stools from seventeen cases, two cases occurring in childhood, all of which presented dysenteric symptoms; also the stools of two adult cases which were diagnosed enteritis owing to the absence of blood from the stools. Some of the cases were from the Tropics, a number of them occurred on board a ship which had sailed from North America. In all the adult cases amoebae were found, but they were absent in both the children. He fixed them with concentrated bichlorid solution, after making smear-preparations on a cover-glass. They were then hardened with absolute alcohol and stained with haematoxylin-eosin. From the results the author does not feel inclined to ally himself with those who consider that there is an established etiologic relation between dysentery and the amoebae, since they were found in other cases as well, and he has further been unable to make any distinction between amoeba found in dysentery and in ordinary diarrhea. Likewise the protozoa may contain red corpuscles in either form, and this seems to depend upon the character of the diarrhea. Cyst-formation he does not consider a distinctive mark, as he was unable to observe it with either form. It is impossible as yet to say that the amoebae are not entirely harmless. The most important point in favor of their pathogenicity is that they are found in the pus of abscesses of the liver secondary to dysentery. It is suggested that those who have opportunity should make attempts to produce infection, and further should study the stools in as early stage as possible in order that it may be determined how early the amoebae are found. If they are discoverable only after several days have elapsed it is probable that they have no causal relation to the disease. Besides the amoebae Romer found large Charcot crystals in the dysenteric stools and occasionally a cercomonas.

EDSALL.

Diagnosis of Diseases of the Stomach and Intestines by Means of the Roentgen Rays. (*Deutsch med. Woch.*, Jan. 13, 1898.) By Boas and Levy-Dorn.

The authors have had patients swallow large gelatine capsules containing bismuth and with the exterior coated with celluloid in order to prevent solution. Such capsules can be readily seen with the fluoroscope in people who are not too fat. In the case of very fat patients this can usually be done by holding the fluoroscope on the proper level and having

the patients make lateral movements, when the shadow of the capsule is seen. Powerful rays and high tension currents are necessary. In the most of their fourteen observations they found the capsule lying along the greater curvature of the stomach or in the cecum; occasionally it was seen in other portions of the large intestine. It passed the remaining parts of the digestive canal so rapidly that frequent examinations were necessary in order to find it elsewhere. The capsules leave the stomach regularly within twenty-four hours and reach the cecum within this time, unless there be stenosis of the pylorus. In such cases they have seen them still remaining in the stomach for as long as five days. They judge from this that if they still remain in the stomach after more than one day, a stenosis of the pylorus is present. If no constriction is present further down, the capsule will be found in the stools within two to six days of its ingestion. They suggest that the method might be used in the diagnosis of the location of an intestinal stricture, but the capsule must be given in such cases only when an operation is soon to follow, as otherwise absolute obstruction might occur.

EDSALL.

The Demonstration of HCl in Stomach-Contents by Means of Alphanaphthol. (*Centralbl. f. Inn. Med*, 1897, No. 39.) By Dr. Ferd. Winkler, of Vienna.

The author has partially revised Molisch's alphanaphthol-hydrochloric acid test for grape-sugar. The test is carried out by adding to a small quantity of gastric-contents a few grains of grape-sugar. Place the mixture in a porcelain dish and add to this a few drops of a 20 per cent solution of alphanaphthol; heat gently, and at the end of the evaporation a blue violet zone appears which rapidly darkens to an inky color. Rapid heating spoils the reaction by obscuring the blue color with the brown of burnt organic matter. The sugar may be previously dissolved (.5% to 1%) in the naphthol solution, if wished, instead of adding in substance, or in place of the dextrose milk-sugar or a few drops of milk may be used. The reaction is present in a watery solution of HCl of 4000 to 10,000 strength; it does not appear with stomach contents, unless free HCl is present—lactic and acetic acids do not give the reaction. It often appears in stomach-contents without the addition of grape-sugar, owing to the action of the sugar already present from digestion of starches.

EDSALL.

A Case of Hiccough of Unusual Duration and Severity; Successful Treatment by Galvanism. (*Lancet*, Dec. 4, 1897.) By George Herschell, M. D.

The author reports a case occurring in a woman of twenty-four years. She was very anemic. Under iron, bromides, bismuth and arsenic, she improved but had attacks every few days. About six months after the condition began she had a severe fright which greatly augmented the severity and frequency of the attacks. A month after this fright she had an attack of such violence that it was feared it might prove fatal. In this attack a continuous current of about eight milliamperes was applied,

the anode being placed alternately for a minute or so to the sides of the neck, whilst the kathode was placed upon the epigastrium. Almost instantaneously she was relieved and had no attacks for several weeks. At the end of this time the condition recurred, gradually increasing in severity, the attacks sometimes lasting throughout an entire week. A year after the beginning of the attacks she was admitted to the hospital and given a daily application of fifteen milliamperes of the continuous current, the anode on the epigastrium and the kathode on the small of the back. This was followed by an electric brush to the epigastrium. As the improvement following this was not permanent, the anode was placed alternately to the pneumogastric nerves in the neck whilst the kathode was placed in the back of the neck. From this date she improved rapidly and recovered completely. The author does not consider the case of an hysterical nature as the attacks occurred during sleep and the ordinary hysterical remedies were of no benefit, and because the application of electicity did not cure until applied in a particular manner. He thinks the attack had its origin in some irritation reflected from the stomach, an idea he thinks confirmed by the fact that the application of electricity to the pneumogastric nerves resulted in a cure.

McC. Hamill.

A Diagnosis of Trichinosis. (*Boston Medical and Surgical Journal*, Dec. 30, 1897.) By Dr. R. C. Cabot.

Dr. Cabot reports the fact that in making a differential count of white corpuscles in a case, of the diagnosis of which he had no knowledge, he found 27 per cent of eosinophiles. In the light of a communication made to him by Dr. Thayer, to the effect that he had discovered an extraordinarily large percentage of eosinophiles in two cases of trichinosis, Dr. Cabot was led to suspect the existence of this condition in the case under consideration. He immediately made inquiry of the physician for whom the blood-examination was made, and discovered that he had suspected the same condition, his opinion being based on the following history. The patient had been sent abroad for his health. While in Germany he improved very little. In the middle of the summer he developed a severe gastro-intestinal attack which was followed by considerable muscle soreness. When he returned in September his physician discovered a condition which he had first thought to be a neuritis. There was a great deal of soreness in the muscles of the calves of the legs and in the biceps. This gradually lessened, but was followed by an edema of the hands and face. The patient was so much improved at the time the blood examination was made that the idea of making an examination of the muscles to confirm the diagnosis was abandoned.

McC. Hamill.

THERAPEUTICS.

Treatment of Pertussis by Means of Asaprol. (*La Médicine Infantile*, January, 1898.) By Moncorvo.

The author, by a series of bacteriological examinations, found that

corrosive sublimate, resorcin, citric acid, and benzo-naphthol were capable of promptly destroying the organism of pertussis and of preventing its growth in the culture medium. Even before these experiments, since 1883, he had used a solution of resorcin in this condition, applying it, be means of a brush with a long curved handle, to the posterior pharyngeal walls and about the region of the glottis. He has had excellent results from this treatment. Latterly he has substituted asaprol—a soluble derivative of B-napththol—in the form of an aqueous solution of the strength of 1 to 100. This solution was applied every two hours in the day. He gives a series of twenty-six cases ranging in age from one month to nine years. In every instance in which the remedy has been applied from the beginning of the attack, the case has been cured before the convulsive stage was reached, and in those cases in which this stage had been reached, recovery followed in from five to ten days. The solution is of a sweetish taste and consequently well borne by infants. In the beginning it induces attacks, but this is very shortly overcome.

McC. Hamill.

Nuclein: Its Origin, Chemical Composition, Physiological Action and Therapy. By Buchner, Hankin, Vaughan, McClintock and King.

ORIGIN.

Nuclein is that constitution of the cell by virtue of which it grows, develops and reproduces itself. It is the chemical basis of the nucleus. Nuclein is contained in the cellular envelop of the tubercle bacillus and it is the nuclein that takes the stain. It has been obtained from the thymus and thyroid glands, spleen, testicle, white of egg, and from brewers' yeast. It is abundant in the polymorpho-nuclear leucocytes. The number of kinds of nuclein is limited only by the different varieties of cells.

CHEMICAL COMPOSITION.

It consists of a complex proteid base, nucleinic acid, containing from 5 per cent. to 9 per cent. of phosphorus. The terms "Nuclein" and "Nucleinic acid" are often used interchangeably, as it is generally impossible to obtain nucleinic acid free from the albuminous base.

PHYSIOLOGICAL ACTION.

The predominant action of nuclein is stimulation of glandular activity with increase in the number of polymorphonuclear leucocytes, therefore, concurrently an increase in the germicidal properties of blood-serum.

NATURE OF ITS ACTION.

It is not germicidal in the circulation to all organisms, because disease organisms are of many types.

EFFECT ON THE PULSE.

Increased frequency as a rule within three to five hours.

EFFECT ON TEMPERATURE.

Rise of one degree or more within three to five hours.

THERAPY.

Vaughan has reported seventy-six cases of tuberculosis in all stages and with no exclusions in all of which the tubercle bacilli were found and treated with daily hypodermic injections of 1 per cent. solution of nucleinic acid, and of these so treated 24 per cent. have recovered. King reports thirty more similar cases treated by daily hypodermic injections of 50 minims of the 5 per cent. solution, and of these 22 per cent. recovered.

The writer has given the 1 per cent. solution in teaspoonful doses every three or four hours with local applications in cases of follicular tonsillitis, with marked benefit to the patient.

WOLDERT.

SURGERY.

Injuries of the Ureter. (*Edinburgh Medical Journal*, Jan. 1898.) By Henry Morris, M. A., F. R. C. S.

The author comments on the extreme rarity of cases of injury to the ureters aside from those occurring in the course of surgical operations, and the doubtful nature of many of those reported. He classifies injuries of the ureter into three divisions: 1. Subparietal injuries, or those with no open wound communicating with the injured ureter. 2. Those in which there is such a wound. 3. Surgical wounds of the ureter. Of the 23 cases reported as examples of the first class, which he has collected from the literature, in eleven the injury was to the kidney or pelvis, and not to the ureter. In two cases the rupture was verified; in four it was probable and in the remaining five it was rendered probable by a subsequent hydronephrosis or pyonephrosis apparently dependent upon stenosis of the ureter.

The causes enumerated were: kicks from horses, crushing injuries of the abdomen, the bursting of a cannon-shell, and strain in jumping from a horse. The seat of injury is usually near the fixed points above or below, the middle portion being protected by the soft parts and thus escaping injury. An abnormal lack of adhesion to the peritoneum may act as a predisposing cause of rupture. The majority of cases have occurred in children under 16 years of age. In those cases in which obstruction was followed after a considerable interval by dilatation of the kidney, the stricture must have been dependent on ureteral injury with repair, or periureteral inflammation, or occlusion with subsequent organization of blood-clot. The symptoms are not characteristic. Hematuria may be present or absent, hemorrhage being usually not marked. There may be complete anuria. Pain is referred to the loin or anterior portion of the abdomen, and there may be vomiting or collapse. Ecchymosis and suppuration may also occur. The appearance of a tumor in the flank a few days or weeks after the injury, due to the extravasation of urine alone or combined with blood in combination with the foregoing symptoms, would point to rupture of the ureter. The appearance of a tumor in this region at the expiration of several months or years would suggest dilatation of the kidney, the result of ureteral stricture.

In regard to treatment, if an immediate diagnosis of subparietal rupture could be made, immediate suture would be advisable, but this is impossible. Repeated puncture may be followed by a cure but is uncertain. The best procedure is a lumbar incision that evacutes the fluid, permits an examination of the kidney and ureter and a repair of a perforation if such be found, with subsequent free drainage. In complete division, the ends should be approximated if possible, otherwise a fistula must remain. Nephrectomy is only advised for intractable annoying fistula, and for suppuration of the kidney, which latter complication occurred as a sequel of the three cases in which this operative procedure was carried out. If a stricture be detected as a cause of hydronephrosis, it should be treated by the method which Fenger has successfully carried out, that is longitudinal division with subsequent lateral approximation of the wound as in the Heineke-Mikulicz operation of pyloroplasty.

JOPSON.

Remarks Upon the Differential Diagnosis, the Pathology and the Treatment of Appendicitis. (*Annals of Surgery*, March, 1898.) Dr. John B. Deaver.

The author has embodied the result of a further experience with appendicitis. The more uncommon affections which are mistaken for appendicitis he finds are movable kidney, diseases of the gall-bladder and gall-ducts, perforating ulcers of the gastro-intestinal tract, kidney colic, extra-uterine pregnancy, ovarian abscess and ovarian cyst, with twisted pedicle.

In arriving at a diagnosis between movable kidney and appendicitis, attention is drawn to the absence of the three cardinal symptoms of appendicitis, viz.: pain, tenderness and rigidity, in movable kidney. The pain he finds is more localized in appendicitis and is increased upon pressure, while in movable kidney the pain is relieved to some extent and is only referred to the kidney and along the course of the ureter.

Attention is drawn to the fact that the onset of appendicitis and biliary colic are somewhat similar, namely: a sudden attack of acute pain accompanied by persistent vomiting, which is more severe in the latter affection than in appendicitis. The location and the degree of pain differ from that of appendicitis, being more continuous and radiating from the lower right chest-wall to the umbilicus, in biliary colic. After the expiration of a few days the pain will become localized over the gall bladder at about the ninth costal cartilage.

In kidney colic the symptoms are ushered in by a chill followed by excruciating pain in the loin, which is often relieved by pressure. The pain follows the course of the ureter and is relieved upon emptying the bladder. Microscopic examination of the urine will in the majority of instances show the nature of the trouble. Although pain may be present over the ureter, in appendicitis, the pain is increased on pressure, there is a mass in the iliac fossæ and rigidity of the abdominal walls.

The author finds as a rule that a patient with a perforated ulcer of the stomach will present a history of dyspepsia, that perforation of the stomach

nearly always occurs when the organ is partly filled or full and the patient in upright position, coincident with a rapid change in position of the body, sneezing or violent cough, is attended by acute pain in the epigastrium and followed by faintness or collapse.

A peritonitis the result of a perforation of a typhoid ulcer, and peritonitis the result of acute appendicitis, may need to be distinguished in the differential diagnosis between these two affections. A careful inquiry into the history, temperature, examination of the abdomen, the presence of an enlarged spleen, the nervous manifestations, will readily make it clear as to the nature of the trouble.

The main points to be observed in arriving at a diagnosis between appendicitis and extrauterine pregnancy are, the history of menstrual derangement, associated with other evidence of pregnancy, and a bloody vaginal discharge containing shreds of the decidual membrane and clots. Vaginal examination will reveal a painful mass in the cul-de-sac, unless the pregnancy is at or near the fenestrated extremity of the fallopian tube. Suppurating ovarian cyst or ovarian cyst with twisted pedicle of the right side, can only be confounded with appendicitis complicated by abscess.

There is usually, however, in the two former afflictions a history of slowly growing tumor which may suddenly give rise to acute pain owing to a change in the character of its contents or to rotation on its pedicle. A vaginal or combined vaginal and rectal examination will usually clear up the diagnosis.

The most important sections of Dr. Deaver's paper are found in the report of the pathological examination of two hundred appendices removed and examined from January 1 to December 1, 1897, at the German Hospital, and in the treatment.

The nature and manner of invasion of the micro-organisms was studied, and the same predominant type of organism was found to be present in the lumen, in the wall of the appendix and in the pus of the abscess surrounding the organ, also in the exudate.

It was also noted that abrasion of the mucous membrane was an almost constant feature, and that invasion of the walls of the appendix by the micro-organism was due to this fact. The erosion of the membrane was due to the presence of foreign material, either enterolith, fecal concretions or inspissated mucus.

Of the numerous methods suggested for the treatment of appendicitis early operation is, in his opinion, the only one upon which reliance may be placed for a definite, curative result in the vast majority of cases. Surgical interference, instituted promptly, as he has always advocated, will in the hands of the experienced operator be followed by a mortality of not more than 1 per cent., while at the same time removing the danger of subsequent attacks, any one of which may be attended by a fatal result.

He emphasizes the fact that the appendix once the seat of an inflammation is never restored to the condition in which the inflammatory process found it, as a careful microscopical study will prove. This being

an absolute fact, there is but one cure,—namely, removal of the affected organ. When brought face to face with a case of appendicitis he professes to know but two things in regard to the disease, one of which is that the disease is appendicitis, and the other that the appendix should be removed.

Under the best-directed medical treatment all that can be hoped for in any given case of appendicitis is temporary recovery.

The stand Dr. Deaver has taken is to remove the appendix in the presence of pus, and not to content himself by simply evacuating the abscess. The removal of an inaccessible appendix in the presence of pus or of an abscess should not be attempted by the occasional operator. There is no class of work calling for greater skill and capable of taxing the expert more than some of these appendical abscess cases. This does not discredit the operation, but it is an argument against faulty technique.

BRINKMANN.

Histology of Follicular Appendicitis. (*Le Progrès médical*, Jan. 29, 1898.)

In a study of this disease several interesting points are elaborated. Ordinary recurrent appendicitis has its seat in the closed follicles of the organ and presents varieties and degrees according to the location, intensity, and character of the lesion. Follicular appendicitis explains most of the accidents which complicate inflammation of the appendix and particularly perforation. The pressure of a calculus in the appendix is quite frequent and has been regarded as a cause of disease. Instead of being derived from the bowel-contents, they are, on the contrary, composed of phosphates, alkaline carbonates or fatty acids, and contain no fecal matter whatever, and are therefore true calculi derived from mucus and blood and analogous to salivary calculi.

Examination of the wall of the appendix shows the closed follicles swollen and at points ulcerating upon the surface of the intestines. The mucous glands and the follicles of Lieberkuhn are better preserved. Appendicitis with calculus usually is mild and protracted, catarrhal in nature, and healing occurs by adhesion of the walls and calculus.

Obliterating appendicitis follows successive attacks of folliculitis in various portions of the organ. The ulcerated surfaces adhere and gradually convert the tube into a fibrous cord, or if limited to the area near the meatus constriction may occur with cyst-development. Gangrenous appendicitis is characterized by rapid multiple perforations, generalized peritonitis, and more or less suppuration. This is a distinct follicular ulceration resembling that of gangrenous dysenteric ulceration. At the site of the perforation the mucous and muscular coats disappear by a sort of liquefaction, and death of the tissue with perforation occurs.

MINOR MORRIS.

OBSTETRICS AND GYNECOLOGY.

Placenta Praevia Centralis. (*Centralb. f. Gynäk*, June 5, 1897.) By Dr. Otto e Weiss.

This article is the report of a case in which the placenta was attached to the whole of the anterior lip of the cervix and to a portion of the posterior one. The patient was brought to the clinic in collapse due to the placenta prævia. External erosion was done, the placenta perforated, and the fœtus delivered by the feet. The patient recovered slowly from the severe anæmia only to die upon the third day from streptococcic infection. The uterus removed, post-mortem showed that the placental site extended down on to the cervix as stated above.

L. S. Smith.

Pregnancy After Ventro Fixation. Scholmogoroff, in the *Centralblatt f. Gynäkologie*, June 19, 1897, reports a pregnancy and normal delivery in a patient upon whom he had performed hysteropexy and colpoperineorrhaphy for complete prolapse of uterus and vagina. Four years after the original operation the womb was in its normal position.

Gibert, in *L' Obstétrique*, March, 1897, reports two labors at term after abdominal hysteropexy. One case, owing to weakness of the expelling powers, required forceps. The presentation was normal. Labor in the second case was complicated by a large cul de sac formed in the left posterior wall of the uterus, which interfered with the descent of the fœtus and the engaging of the head. Version had to be resorted to.

Enough cases have been reported to show that a woman upon whom a hysteropexy has been done may become pregnant, go on to term, be delivered normally, and afterwards retain the benefits of the operation. Vaginal suspension is now discarded as worthless.

Where complications arise in the labor they may be traced to faulty methods of operation. The suspending sutures should be passed so as to form the adhesion with the abdominal wall to the anterior wall of the uterus, between the level of the tubes above and the vesio-uterine cul de sac below. The adhesions should be firm, and cannot interfere with the enlargement of the fundus as parturition progresses.

L. S. Smith.

A Funis Only Six and a Half Inches Long. (*Archives of Pediatrics*, February, 1898.) By J. M. Krim, M. D.

The author reports the following case which was under the care of a midwife. On arriving at the patient's house he found her almost moribund, and was told by the midwife that the woman developed this condition each time she had a pain. During the pains she would develop suggestions of a convulsion and complain of terrific pain in her abdomen. Not comprehending the nature of the condition the forceps were applied. During the application of a limited amount of traction something suddenly gave way, and the head was easily delivered. There was profuse bleeding; examination of the child showed the cord to be torn close to

the abdomen. The uterus was found partially inverted. The placenta was delivered by traction, when it was discovered that the umbilical cord was only six and one-half inches long.

McC. Hamill.

The Present Status of Vaginal Operations for Diseases of the Pelvic Organs. (*Medical News*, Jan. 29, 1898.) By Edwin B. Cragin, M. D.

The disadvantages are hemorrhage, and injuries to neighboring organs with resulting fistulæ, and the difficulty of differential diagnosis by the sense of touch between the various structures. The writer believes that in a properly selected class of cases the disadvantages can be overcome and that this method of operating has the advantage that the shock is less, the mortality rate is decreased, the convalescence is smoother, and vaginal herniæ are almost unknown.

The author believes that operations for the removal of the appendages without hysterectomy are best done by the abdominal method except in the case of small ovarian cysts and prolapsed ovaries, where the vaginal route should be chosen. In ectopic gestation the abdominal route is also to be chosen. During pregnancy in women whose canals are obstructed by tumors which cannot be raised out of the pelvis the vaginal method has been used by the author with good results. He believes the following groups of cases to be particularly suitable to the vaginal method: 1. Pus cases in which the removal of uterus and appendages is indicated; 2. Cases in which the exudate indicates drainage without the removal of any organ; 3. Small fibromyomata.

Hysterectomy when indicated in puerperal septicemia had best be done by the vaginal method.

Nicholson.

The Mechanico-Therapy of Movable Kidney. (*Lancet*, Jan. 29, 1898.) By Dr. A. Symons Eccles.

Twenty-one cases of movable kidney, more or less severe, many of them, as is usual, complicated by gastroptosis and enteroptosis, were treated without operation. Five of these were greatly improved by abdominal massage, exercises, and the application of a pad and belt, and three of this number had continued free of their former marked symptoms up to the time of the report, i.e., for two to five years. In sixteen cases a rest-cure of from two to eight weeks was carried out in addition to frequent reposition of the displaced organ and mechanical support. In one of these cases complete failure resulted. Seven were lost sight of shortly after the treatment. The remaining eight cases are reported in detail. Most of these were either cured or markedly improved, the kidney remaining in normal position and all symptoms having disappeared. In nearly all the reported cases there had been, previous to treatment, local pain and tenderness in the displaced kidney or in the right lumbar region, in addition to the usual nervous and dyspeptic symptoms. This is contrary to the experience of other observers. A careful search for this lesion will show that in a large number of persons, mostly women, the right kidney is displaced, without, in a majority of the cases, the presence

of any local pain or tenderness, and often without the presence of any decided symptoms. Usually, however, the patient will be found to be nervous and to be a sufferer from derangement of both the gastric and intestinal digestion. The writer emphasizes the importance of the treatment by the mechanical methods described, as avoiding the risks of operation and promising relief to many who will not consent to the surgical remedy.

BOARDMAN REED.

Conservation of the Ovary in Hysterectomy and Hystero-Myomectomy. (*The British Medical Journal*, Jan. 39, 1898.) By Howard A. Kelly, M. D.

Dr. Kelly quotes numerous articles and experiments to prove the value of the ovary to the economy of the woman, and then gives an excellent table of twenty cases where the ovary was not removed in cases of hysterectomy and hystero-myomectomy, showing the value of retaining the ovary.

Besides the ordinary data, the list gives the anatomic diagnosis, the organs removed, the generative organs left, the condition of the patient in the hospital, symptoms before operation, general health since the operation, symptoms the patients were now suffering from, and any symptoms of the artificial menopause. The last two of these columns show the marked value of the conservative operation. The best method of operation leaves both ovaries and tubes after ligature at the uterine cornu, including the isthmus of the tube and the utero-ovarian ligament, then the round ligament, and then the uterine vessels, amputating through the cervix and proceeding up the other side in the same way.

GIRVIN.

A New Method of Ventro-Fixation, Being a Modification of Alexander's Operation for Retroversion and Prolapse. (*The Lancet*, Feb. 12, 1898.) By C. J. Bond, F. R. C. S.

After reviewing the disadvantages of the existing operations for ventro-fixation, the author describes the method he has used in his last three cases with very good results, as follows:

The abdomen is opened—the round ligament on one side is exposed and pinched up between the thumb and finger, enclosed in its peritoneal covering. This is incised about a finger's breadth from the corner of the uterus and the loosely connected fibres of the ligament isolated from their sheath and pulled upon until the ligament is made tense, then it is divided near its pelvic end, at least three inches from the uterus, by a snip of the scissors, and this cut ligament is pulled out of its investing peritoneal sheath. The same process is carried out on the other side, leaving two living animal ligatures attached to the fundus of the uterus. The skin on one side of the abdominal incision is now pulled back and a pair of sinus forceps passed through the whole thickness of the abdominal wall except the peritoneum, these grip the end of the ligament and pull it back through the abdominal wall. This is done on the other side of the incis-

ion with the other ligament, and the abdominal wound is then closed in layers. The ends of the two ligaments may now be tied together in a knot over the abdominal incision beneath the skin, or they may be stitched together, and finally they may be folded upon themselves and stitched down to the abdominal wall, uniting the skin over them. In prolapse cases it is important to fix the fundus high enough to draw up the relaxed vaginal walls. The advantages claimed for this operation are the avoidance of all dead ligatures in the peritoneum, no suture is passed into the uterus itself, and, in case of subsequent pregnancy the suspending round ligaments would undergo hypertrophy and allow the fundus to rise in the abdomen. For retroflexion alone the ligament is found in the same way, but in the middle of its course, separated and pulled out of its sheath until tense, ligated at the base of the loop thus formed, the loop cut off and the ligated portion allowed to slip back into its sheath. This is done on both sides and has proved of value. The advantages over Alexander's operation are, the possibility of inspection of the adnexa and their removal if necessary, and the greater ease in finding the round ligament.

GIRVIN.

A Case of Spontaneous Rupture of the Uterus During the First Stage of Labor. (*The Lancet*, Feb. 26, 2898.) By Henry W. J. Cook, M. B.

This case occurred in a woman aged 33 years, in her first confinement. All previous labors had been rapid and normal. She had been curetted for endometritis twelve months before the present occasion. Normal labor began about 3 a.m. When first seen about two hours later there was a normal presentation and position, the fetal heart-sounds were heard and the movements felt. The os was the size of a "shilling" and the membranes were unruptured. The pelvis was roomy and there were no obstructions. Two hours later the os was the size of a half crown, the head engaged in the pelvic brim and the pains became much more severe.

She was allowed to sit up and be around a little, but during a pain while up, about twenty minutes later, she suddenly dropped on the floor with severe pain, and showed soft rapid pulse, with some vomiting and faintness. At this time there was a gush of blood and liquor amnii from the vagina. Upon examination no part of the child could be felt, but where the os had been, was a ragged surface like placental tissue. The abdomen was irregularly elongated transversely. The rent was found to be posterior and extending from the vagina to the fundus, and the intestines could be felt through this rent, but no child. As the examination caused great pain an assistant was sent for, and after some delay ether was given, and the child delivered through the rent by traction on a foot. The head alone caused slight difficulty by catching in the tear. The prolapsed intestines were easily returned and the cord was followed up to the placenta, which was found almost under the liver. The uterus and vagina were douched, ergotin given hypodermically and the uterus and rent packed with iodoform gauze after the delivery of the dead child.

The woman rallied for a short time under the use of stimulants, but died six hours later from shock. This case is of special interest on account of the position and extent of the tear and the lack of any apparent cause.

GIRVIN.

PEDIATRICS.

On Vulvo-Vaginitis in Children.

Malcolm Storer (*Boston Medical and Surgical Journal*, Volume CXXXVIII. No. 3) says that while this disease is less common here than in certain foreign cities, cases are fairly numerous. He divides the etiology into two main groups—those due to lowered vitality and those due to infection; the latter group he subdivides into traumatic and gonorrheal. The traumatic form may follow attempts at rape, blows on the genitalia, etc. The second division of the infectious cases are those due to the gonococcus, although some cases are probably due to certain diplococci closely resembling the gonococcus. Infection may be direct or indirect, the former much more rarely. The medium of indirect infection may be toilet articles, as towels, etc., sleeping in the same bed with infected persons, infected water closets, and numerous other mediums of the same class.

In gonorrhea in children the urethra is quite as apt to be invaded as is the case in adults, while cystitis is very rare. The vulvo-vaginal glands are generally spared and the inguinal glands scarcely ever involved. He thinks the uterus and tubes are more frequently infected than is generally supposed. Many cases of arthritis have been reported and pericarditis and endocarditis may occur Ophthalmia by direct transmission is quite common. He emphasizes the fact that while gonorrhea has a much better prognosis in children than in adults, it does have severe and even dangerous complications, both immediate and remote, among which he mentions stricture of the urethra and the possibility of salpingitis remaining dormant until later in life and then giving rise to pelvic disease.

With improvement in the general condition the non-specific cases tend to recovery spontaneously.

Contrary to the opinion of some writers the author is convinced that treatment in the infectious cases not only shortens the attack, but also renders complications and sequelæ much less probable.

As to the treatment, the child should be confined in bed during the acute stage, should be encouraged to drink freely and be given mild diluents or balsams, as ol. santali, five drops, t. i. d., and the bowels kept open. If the urine is very irritating to the inflamed vulva, the child may be allowed to urinate in a warm hip bath. The genitals should be kept clean with hot boracic acid solution used several times a day, and, if necessary, pain should be calmed by sedative washes or lead water and opium. The local treatment is to place the child in the lithotomy position and thoroughly wash the vagina twice a day with a pint of fairly hot solution of permanganate of potash injected from a fountain syringe through a No. 10 catheter. Soap should be used as a lubricant for the catheter, as oil or vaselin prevents the solution from coming in contact

with the tissues. The strength of the solution at first is one-half grain to the pint, gradually increased until a strength of 1-800 or 1-500 is reached.

If after four weeks some discharge continues and gonococci are still present he injects two drachms of a two per cent. solution of silver nitrate three times a week, alternating with the permanganate solution.

In one case quoted argonon was used, and the opinion is expressed that this salt will prove a valuable germicide in these cases.

KINNE.

Infantile Scorbutus. (*La Médicine Infantile*, January, 1898.) By Moizard.

The author describes a case occurring in a little girl of one year. She was born at term of healthy parentage. For three months she was breast-fed, and from that age was given a modified milk. She had her first eruption of teeth at seven months; at one year she had only the four median incisors. She seemed normally developed but was anemic. The following condition began to manifest itself shortly after the third month: The legs were semi-flexed and held fixed, the least movement induced pain and the slightest touch of the legs made the child cry; on corresponding portions of the lower third of the two tibiæ there was a tumefaction, the upper part of which became progressively lessened. It was especially marked under and in front of the internal maleoli. The skin was tense but of normal color; there was neither fluctuation nor crepitation, but a decided sense of resistance. There was no abnormality of the osseous system elsewhere. The movements of the right arm seemed painful. The skin and eyes were normal.

There were mild signs of rachitis, as, beaded ribs and slight tumefaction of the radial epipheses. The anterior fontanelle was closed. The gums of the inferior median incisors were a little swollen and had a slight hemorrhagic border at the neck of the teeth. The upper gums were swollen and vegetated, blackish in color, slightly bloody and granulated. These lesions extended to one-half centimeter on either side of the superior incisors. The tumefaction of the tibiæ and the resulting pseudo-paralysis were caused by sub-periosteal hemorrhage. The treatment consisted in substituting plain cow's milk, to the 24 hours' quantity of which was added 5 coffee-spoonfuls of puree of potato. In addition to this, the child received five spoonfuls of the juice of water cress. The mouth was swabbed frequently with a warm solution of boric acid, and the legs were enveloped in cotton. The patient had entirely recovered in twenty days.

S. McC. HAMILL.

Some Observations on the Composition of Human Milk. (*British Medical Journal*, Jan. 22, 1898.) By Alfred H. Carter, M. D., F. R. C. P., H. Droop Richmond, F. I. C.

The authors made analyses of 94 samples of human milk. In all but seven instances the samples were taken some time within the puerperal month. They examined in almost each instance the milk secreted before

and after suckling. Their results differ very decidedly from many of the analyses previously recorded, especially from those of Vernois and Becquerel. They accorded much more closely with those of Lehmann and Leeds. They found the following proportions of the different ingredients of milk to each other: that of fat to carbo-hydrates was as 1 to 2.2 nearly; that of fat to proteids was as 1 to 0.6, while that of proteids to carbo-hydrates was as 1 to 3.6.

The authors found wide variations in every ingredient of milk. The widest were met in the fat-constituents, the largest amount being 8.82 per cent., while the lowest was only 0.47 per cent. Proteids varied from 4.05 per cent. to 1.02 per cent., and the proportion of sugar varied least of all, from 8.89 per cent. to 4.38 per cent. The highest specific gravity obtained was 1042.6; the lowest specific gravity was 1024. More than one-third of the samples gave a specific gravity of between 1031 and 1032.5. An increased percentage of fat tended to a reduction of the specific gravity, and an increase of the solid constituents, other than the fat, tended to elevate the specific gravity. The proportion of fat was usually greater in the samples of milk examined after suckling than before. In fact, the difference in the fat-percentage was the only important change observed between the milks examined before and after suckling. The proportion of sugar shows much less fluctuation than that of fat or proteids. The results they obtained by estimation of the sugar with the polariscope as lactose were found to differ widely from the difference in composition. They call attention to the fact, also, that human milk does not have a sweetish taste, while a 7 per cent. solution of lactose, artificial human milk made from cows' milk with 7 per cent. of lactose, and asses' milk (with about 7 per cent. of lactose), all have a distinctly sweet taste. They made several determinations of sugar by polarization and by Fehling's solution gravimetrically, and compared these with the results deduced by difference. In every case they found a serious deficiency. They believe that the sugar of human milk is not lactose. They find some evidence that two sugars are present, a crystalline aldobiose and an amorphous substance. The authors found that a formula constructed as a quantitative expression of Holt's method of ascertaining the amount of proteids, when applied to their analyses gave good results in many cases, but the exceptions were so numerous and so marked that they were compelled to abandon it and to conclude that Holt's method is based on a fallacy. They found the percentage of ash to vary from a maximum of 0.5 to a minimum of 0.17. Usually when the percentage of ash was so high so also was the percentage of proteids. Among the 42 children nourished on the various samples of milk in this analysis 5 died. In four of the fatal cases the percentage of proteids was high, ranging from 2.05 to 4.02. In the other fatal case it was 1.71 before and 1.77 after suckling. In this case the supply of milk was scanty and the child in wretched condition at birth. In every case but three in which there was a high percentage of proteids, namely, above 2.5 per cent., the milk disagreed. The variations in the percentage of the other

ingredients are much less likely to disagree. They found the following composition as the one most likely to agree with infants: water 88.12, fat 3.11, sugar 6.70, proteids 1.83, ash 0.24, refractive index of fat 51.9 degrees. The milk which agreed best with the infants they further subdivide according to the time which has elapsed since parturition.

Time since parturition.	*Water.*	*Fat.*	*Sugar.*	*Proteids.*	*Ash.*	*Refractive index of fat.*
4 to 6 days	88.01	2.97	6.47	2.25	0.30	53.2°
7 to 14 "	88.21	3.06	6.62	1.85	0.26	51.5°
15 to 29 "	87.74	3.42	6.95	1.67	0.22	51.4°
Over 30 "	88.53	3.00	6.83	1.43	0.21	51.7°

From the above table the authors conclude, first: that the proteids and ash decrease as lactation advances; second, that the sugar has a tendency to increase. It is suggested also that the composition of the fat, indicated by the refractive index, differs in the earlier stages of lactation from that present later. The milk disagreeing with the infants showed in most cases the characteristics of milk in the early stages of lactation to an exaggerated degree, suggesting that the normal functions of the breast were delayed, resulting in the prolongation of the colostrum period.

McC. HAMILL.

Acute Nephritis Complicating Mumps in a Boy of Four Years of Age. (*Archives of Pediatrics*, February, 1898.) By Charles Gilmore Curley, M. D.

There was considerable swelling of the sub-maxillary glands. The child seemed well nourished and the case was considered an ordinary case of parotitis. He was not seen after the first visit for a period of eight days, at which time he was found to be pale with considerable edema of the lower eyelids but none elsewhere. There was anorexia, prostration, restlessness, and irritability. The temperature was 103 degrees F., the pulse was hard and wiry and 140 to the minute. No urine had been voided in the previous 24 hours, nor had the bowels been moved. The urine had been high colored and scanty for two days preceding the suppression. The child was subjected to flushing of the colon with 24 ounces of normal salt solution at 110 degrees F. He was surrounded with hot water bottles and wrapped in blankets. In one hour he had a slight stool and voided two ounces of urine of deep red color. This urine was almost solidified upon boiling and the addition of nitric acid. Microscopically it showed red blood corpuscles, granular and hyaline casts. The improvement was persistent and rapid and on the sixth day of the attack the urine was found to be normal, nor did it show any abnormality after this date. The author emphasizes the rarety of this complication in mumps, the rapid and complete recovery, and the affectiveness of the hot saline solutions in those cases of nephritis attended by suppression.

McC. HAMILL.

Antitoxin as a Prophylactic. (*Boston Medical and Surgical Journal*, Dec. 23, 1897.) By Edward L. Twombly, M. D.

The author gives a brief report of the use of protective injections in the Gwynne Temporary Home for Children. During an epidemic, which showed no tendency to be controlled, 21 of the children and a nurse, all of whom had been exposed, were injected with the serum prepared at the Bacteriological Laboratory of the Harvard Medical School. No cases occurred among those thus immunized. The ages of the children ranged from 2 to 16 years. Two to five c.c. of the serum were used, which was about one-third to one-half the regular dose. There were practically no disturbances following the use of the antitoxin.

McC. Hamill.

New Facts Concerning the Presence of the Diphtheria Bacillus in the Nerve Centers of the Medulla. (*Jour. de Clin. et de Ther. infantiles*, Feb. 3, 1898.) By Richardiere, Tolemer and Ullmann.

The authors refer to the recent work of Barbier, in which he showed that, at the post-mortems of children dead of diphtheria, in a large number of cases, he was able to demonstrate the presence of the Klebs-Loeffler bacillus in many organs (the blood, the lungs, the spleen, and with especial frequency in the nerve centers of the medulla). They have confirmed, in large part, the statements of Barbier. They examined in their autopsies almost all of the organs. They have discovered that with the exception of the lungs, the bacillus of diphtheria is found almost exclusively in the blood, in the nerve centers of the medulla, and in the spleen. In three cases out of four, pure cultures of the age of 48 hours, inoculated in the dose of four drops to 100 grams of the guinea pig, under the skin of the flank, have caused the death of the animal in less than 48 hours. In only one case in the four was the death delayed, and then to seven days. Several facts of interest occurred during these observations. In the case of an infant having diphtheritic angina, proven bacteriologically at the time of entrance to the hospital, the Klebs-Loeffler bacillus had disappeared from the throat ten days before death. The throat of the infant contained only streptococci when it died, 21 days after its entrance to the hospital. At the autopsy the Klebs-Loeffler bacillus was discovered, in the pure state without any microbic association, in the pons and in the medulla. In the lung the bacillus of Loeffler was associated with the pneumococcus. In another case the Loeffler bacillus associated with streptococcus existed only in the centres of the pons and medulla. It was not discovered in any of the other organs, not even in the lungs. They remark upon the fact that while the Klebs-Loeffler bacillus existed in all of these cases in the centres above indicated, that in none of the infants were there any evidences of diphtheritic paralysis, notwithstanding the fact that one infant died after 12 to 13 days of its illness, and another after being in the hospital for 21 days.

McC. Hamill.

A Case of Congenital Absence of the Rectum. (*The American Journal of Obstetrics and Diseases of Women and Children*, November, 1897.) By James McCone, M. D., W. R. C. S., Eng.

The patient was a female child. She was examined on the fifth day. There had been no movement of the bowels since birth ; there was frequently vomiting, and the abdomen was greatly distended. The child was well-developed. The vulva and anus were normal. The catheter introduced into the anus was abruptly stopped one-half inch from the margin. An operation was attempted for the relief of the child's condition. An incision was made from immediately behind the vulva to the coccyx. Through this opening the rectum was sought for in vain. A celiotomy was then performed. The termination of the bowel was found in the right lumbar region, where it ended in a blind pouch, and the mesentery was absent for a distance of two inches at the end. The child survived the operation but eight hours. The author points out the fact that this case opposes the theory of the inflammatory causation of rectal malformations, as there was no ligamentous connection between the anal pouch and the terminal portion of the intestine.

S. McC. Hamill.

Another Case of Hypertrophy and Stenosis of the Pylorus. (*New York Medical Journal*, Nov. 27, 1897.) By F. Schwyzer, M. D.

The author reports a case in a male child who died about the seventh week. He was healthy at birth; he was fed upon condensed milk and water; his bowels were very constipated, and only moved by the use of soap and water injections ; the movements contained white particles and mucus. When four weeks old the child began to vomit frequently ; the stomach was washed out and found to contain much mucus. Free hydrochloric acid was present, with scarcely any starch reaction. The parents objected to the stomach-washing, and the child was not seen for nearly three weeks. In the interim the vomiting had ceased. The child passed large quantities of urine. The vomiting had, however, begun again, and the child seemed to have pain after each feeding of diluted malted milk. This time the child was much emaciated and the abdomen distended ; the stomach seemed filled and the intestines empty. There was no pyloric tumor. The movements were induced only by injections and then were very slight. The stomach was again washed out. It contained much tenacious, glassy mucus, and there was no free acid. Once the vomited matter contained bile. He died two days later.

The postmortem examination showed the transverse and descending colons much distended by gas ; the ascending colon was contacted ; the ileum contained some gas, but no fluid. The pylorus was transformed into an almond-shaped tumor, 26 mm. long, 13½ mm. in diameter. The serosa measured 0.75 mm., the muscularis 3.5 mm., the mucosa, where not folded, 1.5 mm. The mucosa had longitudinal folds about 2 mm. in height. The lumen of the pylorus scarcely admitted a 1½ mm. probe, and it seemed impassable to liquids. The lower part of the tumor projected

into the duodenum. A microscopical examination of the mass showed "the mucosa greatly, muscularis enormously, and the serosa somewhat thickened. The structure of the mucosa was nearly normal. The division in the pars glandularis, muscularis, mucosæ and sub-mucosa was distinct. There were no nests of epithelial cells in the deeper layers of the mucosa. There was marked mucous degeneration in the glandular epithelium, between which and the sub-epithelial tissue were leukocytes, and while the muscularis mucosa was not much thickened, the circular muscular layer of the muscularis was extremely thickened and formed the main part of the tumor. It was composed chiefly of smooth muscle fibers, and a proportionately large portion of connective-tissue cells. In the antrum pylori the circular muscle layers were hypertrophied. The longitudinal fibers also showed thickening. The anatomic diagnosis was clear. Hypertrophy and stenosis of the pylorus."

S. McC. Hamill.

NEUROLOGY.

A Case of "Word" Without "Letter"-Blindness. (*Lancet*, Feb. 12, 1898.) By James Hinshelwood, M. A., M. D.

Hinshelwood adds another to the valuable reports of cases of word-blindness. His patient was able to recognize the individual letters of the alphabet, but could not recognize words composed of combinations of these letters. The difficulty began after an apoplectic attack of short duration, followed later in the day by an epileptiform fit. When this man was allowed to spell the words, either written or printed, aloud, letter by letter, he could read them slowly and laboriously and could also read a few short words, without spelling them. The size of the type made no difference. He could read letters and figures quite fluently, and even combinations of the latter in groups of millions, or as very complex fractions. He could write to dictation and could copy, but was unable to read what he had written.

The visual fields were normal and right homonymous hemianopsia was not present. There was no disturbance in the motor speech. Hinshelwood believes that there was a lesion in the left angular and supramarginal gyri. Later the patient was paralyzed on the right side and motor aphasia was complete. No necropsy was obtained.

The ability to read by spelling the letters is explained as an appeal to the intact auditory word centre in the left temporal lobe. A few similar cases have been reported. Hinshelwood believes that the images of words, letters, and figures are grouped separately within the visual word-memory centre of the left angular gyrus and that one group may be destroyed without involvement of the others. He states that on first thought, this may seem somewhat fantastic, but that the study of clinical facts points strongly to this conclusion.

[The loss of visual memory of words when the visual memory of letters is preserved, may be explained otherwise. Letters are learned before words, and make the deeper mental impression; the memory of

these, therefore, may be preserved after that of words has been lost. Hinshelwood's interesting statements would be more forcible if we had any reported cases in which the visual memory of letters was lost and that of words preserved. The question as to whether figures were learned before words, and, therefore, whether a more lasting impression was made by the former, must also be considered in explaining these cases. It is well to remember that some observers from clinical and pathological studies, believe that alexia without agraphia is due to a lesion separating the common visual centres in the occipital lobes from the left angular gyrus, and not to a lesion within the angular gyrus. The absence of right homonymous hemianopsia in three out of four cases of verbal blindness without literal blindness, in which true agraphia was not present, is not in favor of this view. There are certain neurologists who would be unwilling to locate the lesion in these cases in which agraphia does not exist within the speech zone, but the case of "pure" word deafness, due entirely to cortical lesions, recently reported to the Society of Biology by Dejerine and Sérieux would seem to indicate that our views regarding "pure" word-blindness may need modification.]

SPILLER.

Phenomena Resulting from Interruption of the Afferent and Efferent Tracts in the Cerebellum. (*Philosophical Transactions of the Royal Society of London*, Vol. 188, 1897, pp. 103-133.) By J. S. Risien Russel, M. D., M. R. C. P., Research Scholar to the British Medical Association.

The plan of experimentation adopted by Dr. Russell comprised (1) Division of the cerebellar peduncle of one side; (2) Partial section of the lateral region of the medulla on one side; (3) Transverse sections of the posterior columns and their nuclei on one side; (4) Comparison by the electrical excitability of the two cerebral hemispheres; (5) General convulsions induced by the intravenous injection of absinthe. From the increased excitability of the cortex of the opposite cerebral hemisphere met with after ablation of one lateral half of the cerebellum it was concluded that the one-half of the cerebellum normally exercised a control on the opposite cerebral cortex. The fact that with all the cerebellar centers intact, and with the paths by which impulses may pass to the cerebral hemispheres also intact, section of one inferior peduncle of the cerebellum is followed by a lesser degree of excitability of the cortex of the opposite cerebral hemisphere, as compared with the hemisphere of the same side, suggests the possibility that the influence of control exerted on the opposite cortex by the half of the cerebellum whose inferior peduncle is divided, is heightened by the taking-off of some afferent inhibiting influence, normally acting on this half of the cerebellum and reaching it by way of the inferior peduncle. This view was strengthened by the remarkable results obtained by the intravenous injection of absinthe in animals in which the same lesions had been previously produced.

HINSDALE.

PATHOLOGY.

A Case of Single Fused Kidney. (*New York Medical Journal*, Nov. 13, 1897.) By George Tully Vaughan, M. D.

Vaughan quotes Woolsey as saying that this form of anomaly of the kidney occurs once in eight thousand times.

The body from which this kidney was secured was that of a sailor, a native of this country. He died from acute suppuration peritonitis after resection of the small intestine. There was no history of renal trouble during life, and the urinary secretion was normal. The kidney was absent on the left side, but there existed a fully developed suprarenal capsule in the normal position, which received its blood supply from a small branch from the aorta. On the right side was a large L-shaped kidney mass "as if two kidneys had been fused together at right angles, the vertical portion joining the side of the horizonital portion, which apparently lay on its back with the hilum on its anterior surface. The hilum of the vertical portion was on the inner side. The vertical portion was in the normal positon with a normal suprarenal capsule above, while the horizontal portion extended two centimeters across the aorta just above its bifurcation into the iliacs on the fourth lumbar vertebra." Posteriorly the kidney was flat and smooth; anteriorly it was rounded and had three horizontal and one vertical groove, suggesting a division into lobules. The kidney had two ureters, one springing from a large pelvis near the center of the vertical arm opposite and behind the first two renal arteries and in front of the superior branch of the third artery, which passed over the horizontal portion and descended to the kidney as does the normal ureter. The left ureter came from the hilum on the anterior surface, as follows: "four infundibula spring from the hilum, one from each of the four lower lobes, the largest coming from the lobule at the angle. These infundibula unite outside and in front of the kidney to form a pelvis from which the ureter arises. It descends to a point just below the lower border of the kidney, crosses the right common iliac artery and vein to the inner side of the left common iliac, along which it descends, lying over the left iliac vein normally on the left side to the bladder." The right ureter is five centimeters longer than the left. There are four renal arteries, three coming fron the right side of the aorta and one from the front a little to the left. The veins correspond in number to the arteries. The kidney-structure appeared healthy. The kidney was eighteen centimeters in length; the length of the horizontal arm was 10.5 centimeters; the width of the vertical arm, at its widest point, 7 centimeters; at its narrowest, 4.5; the greatest width of the horizontal arm was 7 centimeters, and its least 5. The mass was 4 centimeters in thickness. The weight of all the urinary organs, together with a small portion of the aorta, was 525 grammes.

McC. Hamill.

Examination of Urine for Tubercle Bacilli, and Its Diagnostic Value. (*Medical Chronicle*, January, 1898.) By R. T. Williamson, M. D., Lond.; of Manchester, England.

While admitting that negative results have been sometimes obtained, even after many examinations of urinary deposits, and yet the disease has proved post mortem to have been tuberculous, still the author has been surprised to find how often the diagnosis of tuberculosis has been definitely settled by such examinations. Hence, after eight years' experience, he believes that whenever pus is present in the urine and the cause thereof is uncertain, an examination for tubercle bacilli ought to be made. When the urine is free from pus, blood, or albumen, and when subjective urinary symptoms are also absent, small caseous fragments are sometimes found in the urine, in which tubercle bacilli may be detected and a definite diagnosis can thus be made. A case is recorded which shows how a general tuberculosis may be first diagnosed with certainty from the urine presenting the characters just mentioned. Though the leprosy bacillus stains in the same manner as the tubercle bacillus, the infrequency of leprosy renders mistake from this source extremely improbable. The smegma bacillus, which is found in the urine of the female as well as that of the male and stains like the tubercle bacillus, has in several cases been mistaken for the latter; at least two cases are on record in which their presence in the urine caused a diagnosis of renal tuberculosis to be given, and yet on removal of the kidney no tuberculosis was found. The difference in the form of the bacilli is not sufficient to base a diagnosis upon, but tubercle bacilli in urinary deposits are sometimes arranged in curved clusters or in chains, while smegma bacilli never have such arrangements. In the case of male patients, if the deposit from the bottom of the urine glass be examined without any special treatment, and stained according to Gabbett's method, the presence of numerous bacilli colored red will be almost conclusive evidence of tubercular disease. Whenever operative treatment is contemplated, all doubt may be solved by the examination of urine withdrawn by the catheter after carefully washing the mouth of the uretha, which precautions eliminate all risk of contamination with smegma bacilli.

CATTELL.

A New Test for Albumoses in the Urine. (*Deutsch med. Woch.*, Jan. 13, 1898.) By Ivar Bang.

The chief fault in Salkowski's method of albumoses is that urobilin gives a reaction much like the biuret reaction. In order to eliminate the urobilin the author proposes that the urine should be saturated with ammonium sulphid and then centrifugated. The albumoses, albumin, and urobilin, together with some uric acid and uric acid salts, are precipitated to the bottom of the centrifugated tube. The supernatant liquid is poured off and the remainder rubbed with alcohol. This

dissolves out the urobilin. The remainder is dissolved in a little water and filtered, and the filtrate tested for albumoses with the biuret reaction. If the alcohol does not suffice to remove the urobilin when that substance is present in large amount, the portion remaining after extraction with alcohol is shaken with chloroform and a few drops of sulphuric acid, the chloroform poured off and the watery solution tested for the biuret reaction. In this manner all the urobilin can be eliminated and too the alcoholic extract can be tested for the presence of urobilin. After this treatment Bang has found but one substance in the urine which can cause confusion with albumoses, and that is hæmatoporphyrin. In case the presence of hæmatoporphyrin is indicated by a red color of the alcoholic extract, it is precipitated out of the urine by the addition of barium chlorid.

OPHTHALMOLOGY.

Tea Amblyopia. (*Lancet*, March 12, 1898.) By E. Kenneth Campbell, M. B., F. R. C. S.

This article is an extract of a paper read before the Twelfth International Medical Congress at Moscow in 1897. Toxic amblyopias from causes other than tobacco and alcohol are very rare, and the case reported is of sufficient interest to deserve full mention.

The patient, a man, forty-six years of age, had always had very good eye-sight up to about September, 1895, since which time it had gradually been failing. On March 2d, 1896, the vision in both eyes was 3-60 and was not improved by glasses. The media were quite clear and the fundus of both eyes was absolutely healthy in appearance. The employment of retinoscopy demonstrated a small amount of hypermetropia about + 5o D.), the fields of vision were normal to " white," but there were partial central scotomata for " red." He was a strong and healthy-looking man and had always led a very regular, methodical, and temperate life. There was no organic disease. He was in the habit of smoking about three pipes of shag a day, one after each meal, and usually drank but one glass of beer in the twenty-four hours, generally after dinner. He was ordered to give up beer and tobacco and prescribed five minims of tincture of nux vomica to be taken three times a day. Campbell continued to see him once a week regularly for a period of two months, at the expiration of which time the eyesight had not improved. He looked very miserable and earnestly craved permission to resume his smoking as he suffered acutely from being deprived of it. Campbell saw him again on April 6th and as the vision had made no improvement whatever (being still 3-60 in both eyes) he made further inquiries into his history and elicited the fact that for years past he has been in the habit of drinking large quantities of strong (and cheap) tea, his daily consumption being on an average twelve large cupfuls. The patient was to abandon this tea-drinking entirely, but allowed to resume his tobacco and beer in the quantities

to which he had formerly been accustomed, as it was judged that he could not otherwise have tolerated the deprivation of the tea. The result was remarkable and significant, for from that moment the vision gradually and steadily improved. On June 4th the vision in both eyes was 6-36; on July 2d it was 6-18; and on September 24th (over four months after abandoning the tea) it had improved to 6-9 and the field of vision had become quite normal.

CROSKEY.

PRACTICAL NOTES.

Errors Incident to a Well-known Test.

From an exhaustive contribution on the subject of alimentary glycosuria by Drs. Achard and Castaigne, the following notes of practical worth are gathered. In testing for the integrity or capacity of the liver cells by means of the ingestion of sugar (alimentary glycosuria), there are a few considerations which weaken the test as far as it reliably goes in chemical researches. Two points, at least, are practically of capital importance. It is impossible to interpret the test of alimentary glycosuria as simply as theory would seem to indicate. For instance, if no sugar is found in the urine after the ingestion of 150 grams of syrup, it is no proof that the functions of the liver are normal. Indeed, the sugar ingested may not appear in the urine, either because it was not absorbed along the digestive tract or because the kidneys did not allow its elimination; yet the liver may be so altered that it could not retain very little, if any at all, of that amount of sugar. It is, therefore, necessary to first test the digestive absorption and the renal perviousness, and this can be done by comparatively simple means, viz.: the use of methylene blue by the mouth (a pill of five centigrams), and hypodermically. — *New Orleans Medical and Surgical Journal.*

Insomnia.

Dr. Reynold W. Wilcox (New York *Post-Graduate*) discusses insomnia at some length. He takes up the physiology of sleep and shows how important it is to use drugs that have the desired physiological action. The author devotes much space to the different drugs used to produce sleep, and condemns opium and all its alkaloids for general use, but believes they have a legitimate sphere in those cases where pain is present. Sulphonal is favorably considered; the continued use of chloral is contra indicated, as in sulphonal we have a remedial agent whose effects are more prolonged and less objectionable. He reports his experience with pellotin, and likes its use hypodermically. The value of strychnin in certain cases is emphasized, and food taken at bedtime often-

times is of great value, especially hot milk. He believes the prolonged hot bath (104° F.), until the surface is thoroughly reddened, to be the best physical method to produce sleep. The author warns the profession of the tendency to establish the drug habit in these cases, and believes it the best plan not to let the patient know what he is taking.

The following are the author's conclusions:

Probably the most potent hypnotic is paraldehyd; next comes chloralamid; then pellotin, and lastly, trional. Sleep follows most quickly after pellotin, next after paraldehyd, then after chloralamid, and lastly after trional. With moderate doses the longest sleep is obtained from trional; next comes paraldehyd; then pellotin, and lastly chloralamid. The danger of a habit from pellotin is extremely light; it is little greater from chloralamid, and there is very great danger from paraldehyd, as shown by the published reports. Chloralamid seems to be the safest of them all; next comes pellotin; next paraldehyd, and the most dangerous for continuous administration is trional.

The Treatment of Apoplexy.

On clinical grounds, M. J. Grasset, in the *Medicine moderne* for January 1, (*Lyon medical*, January 23), advises making use of the word apoplexy in the old sense, symptomatic, and not making it synonymous with cerebral hemorrhage. Apoplexy, he says, is a syndrome connected with other material lesions besides cerebral hemorrhage, and, like all syndromes, it must be specified by its clinical characters.

Apoplexy is the sudden cessation of the cerebral action produced by a spontaneous alteration, organic or functional, of one or more parts of the brain, with preservation of the respiration and of the circulation. The principal cerebral alterations which may produce apoplexy are the following: Cerebral hemorrhage and, less frequently, meningeal hemorrhage; softening, either from thrombosis or from embolism; the cerebral congestion which is often observed in cerebral tumors; progressive general paralysis; disseminated sclerosis; the cerebral edema of the type observed in uremia; and finally the nervous, dyscratic, and toxic apoplexies. The classification of apoplexies based on the nosological species are arthritism, alcoholism, syphilis, paludism, hysteria, etc.

If, says M. Gasset, no rational treatment is found to combat the clot in cerebral hemorrhage, or to combat the necrobiotic condition of the cerebral substance, it does not signify that there is nothing to combat the apoplexy itself and the ictus, which may disappear in spite of the persistence of the clot or of the seat of the softening. While it is admitted that the initial lesion is beyond all therapeutic aid, a rational and useful treatment of the apoplexy itself may be instituted.

There is no prophylactic treatment for apoplexy in general, but there is for the various forms, such as uræmic, alcoholic arteriosclerotic, syphilitic, or paludal apoplexy. Whatever may be the pathogenic theory regarding apoplexy, it is essentially characterized by a congestive condition of the head and by circulatory erethism.

Concerning the treatment, says the author, revulsion in all its forms should be employed to combat this congestion. Preference is given to the local revulsives, that is, to the application of leeches behind the ears or to the anus. Phlebotomy is not indicated unless there are internal circulatory erethism, general turgescence, and a vibrating pulse.

Purgatives may also be used as revulsives, and, if the patient is able to swallow, from two to four capsules containing four grains of calomel may be given in milk, or, every fifteen minutes, a teaspoonful of the following mixture:

Croton oil, ... 1 drop;
Castor oil, Sweet almond oil, } each . . . . . 450 grains;
Syrup of Lemon, ... 900 "
M.

If the patient has difficulty in swallowing or is not able to swallow at all, enemata containing glycerin and from two hundred and twenty-five to four hundred and fifty grains of sodium sulphate in a decoction of a hundred and fifty grains of senna should be employed.

The third group of revulsives comprises the cutaneous revulsives, such as mustard plasters, aseptic compresses soaked in a hot boric-acid solution, etc. Blisters should be very prudently employed, and preference should be given to those of ammonia or chloral.

This revulsive treatment may be supplemented by cold applications on the forehead or on the top of the head; these applications, however, must not be too cold and must not be interrupted suddenly.

In addition to the revulsive treatment there are often, in apoplexy, indications for stimulation and sustenance. If, therefore, the patient is able to drink, the following potions may be employed alternately:

Ammonium acetate, ... 75 grains;
Tincture of canella, ... 45 "
Syrup of orange flowers, ... 450 "
Linden water, ... 4 ounces.
M.

Caffeine, Sodium benzoate, } each . . . . . 30 grains;
Simple julep, ... 4 ounles.
M.

If the patient is unable to swallow, and the indication is urgent, hypodermic injections must be resorted to; from one to five or ten cubic centimeters of ether may be injected in twenty-four hours, and from two to four or six cubic centimeters of the following mixture every day:

Caffeine, Sodium benzoate, } each . . . . . 28 grains;
Boiled water, ... 150 "
M.
Or else the following:
Camphor, Sterilized olive oil, } each . . . . . 150 grains

The room should be kept thoroughly aired, and the patient should

not be allowed to see many persons. Great cleanliness should be observed. The bladder should be watched and catheterism practised if it is necessary; the production of eschars should also be watched.

As a diet, we may give milk and bouillon if the patient is able to swallow. A small quantity of a decoction of cinchona, granulated kola, or, in certain cases, a little alcohol (from an ounce and a half to two ounces of cognac, kirsch, rum, or chartreuse) may be given.—*New York Medical Journal.*

Edible and Poisonous Fungi.

Dr. J. N. Buckham in the *Medical News* says that many popular fallacies exist concerning certain tests for determining the noxious or wholesome qualities of fungals. One old one is that poisonous varieties will discolor a silver spoon or white onions during cooking. All kinds are liable to liberate H_2S in process of cooking or of decay, and this, of course, will discolor silver, brass, lead, or onions. Another is that all varieties which turn black on being sprinkled with salt are poisonous, and those which do not are wholesome. Other tests are, that all which change color when cut, or have vivid colors or viscid caps are poisonous. These distinctions are not to be depended upon, nor are the contrary hypotheses. It is best to avoid all fungi growing in filthy places, those with an unpleasant odor, those which produce a biting or burning sensation in the mouth, those which yield a white milk, or turn blue or greenish when broken, or those in which the flesh is soft, deliquescent, spongy, hard, corky, or maggoty. The amanitas are nearly all dangerous, and some are very poisonous, their active principle being amanitine which acts like morphin; eating them does not produce any symptom for six or eight hours, and then the patient is usually beyond help unless sulphate of atropia, 1-60 grain, is at once administered. All of these have cups, and all fungi with cups had best be avoided.

In edible varieties the flesh is usually firm, but tender, and the odor and taste pleasant and agreeable, resembling fresh meat or hazelnuts. Many of the wholesome kinds are dangerous when old or over-mature, and some of the noxious ones become wholesome when properly cooked. Cases have occurred in which unpleasant or serious results have followed from eating well-known esculent fungi; such may have been due to idiosyncrasies of the victim or simply to overeating. I have thought it possible that ptomains might be developed under favorable conditions; this and the comparative indigestibility of fungi should be investigated more fully than has been done. The only sure test of unwholesomeness is the hackneyed one of eating them first and letting the result be determined by your own after-consciousness, or appear in your obituary.

Peritonitis in Typhoid Fever.

Dieulafoy discusses the varieties of peritonitis in typhoid fever in relation to operative interference. Peritonitis due to perforation usually

supervenes at the period of stasis or during recurrence of typhoid fever, and any part of the intestine involved in the typhoid process may be its seat. It is met with in mild as well as in severe cases, and the diagnosis would be a matter of great difficulty but for a constant and often solitary sign, namely, sudden fall of the temperature. In three cases of intestinal perforation the temperature fell below 35 degrees C. It would be a mistake to suppose that all such falls in temperature indicate perforation. In many cases the defervescence is as sudden as in pneumonia, or, again, such falls follow copious hemorrhages. In the latter case, however, the temperature rises again rapidly, while in perforation it remains low or rises very gradually. Perforative peritonitis lasts from three days to a week, during which time deceptive remissions may occur. The end is almost invariably fatal. In rare cases protective adhesions form, and recovery ensues. In the peritonitis due to the propagation of the infectious process through the ulcerated but not perforated intestine there is a lesion of the vermiform appendix, which may ulcerate and be perforated at the level of its abundant lymphoid tissue. The symptoms are the same as those of other typhoid perforations. "Paratyphoid peritonitis" is due to the remnant of a typhoid lesion of the appendix, and is characterized by a rise of temperature. Surgical treatment of this condition should be the same as in ordinary appendicitis. The problem of when to operate in a perforative peritonitis is a much more serious one, owing to the difficulty of determining that perforation has taken place, the necessity of speedy and opportune intervention, and the fact that there may be several co-incident perforations. Operation, however, holds out some hope of success, and in spite of the ulceration suture may bring about healing.—*Canadian Journal of Medicine and Surgery.*

Some Suggestions for Removing a Plaster of Paris Dressing.

When the dressing is put on, steps may be taken looking toward its removal: (1) A stout string is put underneath, in the line in which the cast is to be opened. When ready to remove, a strong wire nicked in several places is drawn through by means of the string, and is used as a chain saw to cut the plaster. (2) A thin stout steel wire between each layer of the bandage, with the ends out, can be used; each one is pulled out, beginning of course with the top one. A solvent, such as nitric or acetic acid, or even strong vinegar, applied along the line of incision softens the material so that it can be cut with an ordinary knife, or if such solvent is not used, a saw or stout knife may be utilized.—T. J. Rugh, *Philadelphia Polyclinic.*

The Maragliano Serum.

Hager, in a preliminary communication (*Muneh. med. Woeh.*,) Aug. 3, 1897), relates his clinical experience of this serum in the treatment of tuberculosis. A great advantage of the serum treatment over tuberculin

is that it does no harm even in advanced cases of tuberculosis. The report on the value of this serum has been generally favorable. The author would confirm the statement of Maragliano, that the serum may have a favorable action on all the specific symptoms of tuberculosis. The serum does not appear to exercise any effect on the tubercle bacillus itself, but neutralizes the products of this micro-organism. Among cases of advanced phthisis treated within a year, and mostly confined to bed, only one had succumbed to the disease. The author then discusses the action of the serum on the lupus lesion. It can be painted on the patch, and yet produce its beneficial results. It produces a swelling of the lupus tissues, and in a few days retrogressive changes are present. The neighboring lymphatic glands become swollen. Three or four paintings usually suffice if the lesion is not too extensive. The cicatricial changes develop themselves speedily under this treatment. A simultaneous injection of the serum hastens the recovery. It is quite possible that Maragliano's method of obtaining the serum may be improved upon, and thus a more efficient serum produced. The author concludes by stating that those trying the preparation as obtained from Merck will not fail to find that this treatment constitutes an advance. — *British Medical Journal.*

The Treatment of Prolapse of the Anus in Children.

F. Schmey (*Centralb. f. Kinderheilk*, 1897, ii, 41), says that prolapse of the anus in childhood is quite a severe and dangerous affection, for the reason that large hemorrhages frequently occur from the prolapsed mucous membrane, which is usually in a condition of venous stasis. This tends to debilitate the child.

In one of Schmey's cases the rectum prolapsed not only during each stool, but even when the child urinated, and latterly seemingly without any cause whatever. In addition there was much bleeding of the prolapsed mucous membrane, visibly reducing the patient's strength. Prolapse of the rectum is usually found in quite young, badly nourished children. The author claims to have found marked symptoms of rachitis in all children treated by him for prolapse of the anus, and has directed his treatment accordingly. Up to the present time the usual treatment consisted in surgical measures, in the application of a bandage, the excision of spindle-shaped strips of the folds of skin which converge in radiating lines to the anal orifice, or a cauterization of the skin surrounding the anus with the hot iron. Others advocated the subcutaneous injections of strychnine in the neighborhood of the anus, chemical cauterization or the ligature, and excision with narrowing of the anus. The greater number of these measures are not safe; for example, numerous cases of death, due to pyemia, have occurred following cauterization of prolapse of the rectum.

Relying on the observation that all children with prolapse of the anus presented distinct signs of rachitis, Schmey put them on anti-rachitic

treatment, and in this way claimed to have attained exceptionally brilliant results.

His formula is the usual one for the exhibition of phosphorus:

Phosphori, 0.01 ;
Ol jecoris aselli, 100.0.
Ft. Sol.—Sig. One to three coffee-spoonfuls daily.

Generally the prolapse was perfectly cured after the use of one bottle of this medicine, and did not appear again. He offers the following resume : Prolapse of the anus in children, according to my observations, is a symptom and a sequel of rachitis, and its cure is easily and permanently accomplished by the administration of oil of phosphorous.—*Pediatrics.*

Thyroid Medication in Diabetes.

The principal feature of thyroid medication is the acceleration of tissue nutrition with the habitual predominance of denutrition. To this is due its effect on obesity. It is accompanied occasionally by a slight glycosuria, amounting in Ewald's case to permanent diabetes. In Georgiewsky's experiments with dogs this glycosuria did not appear when the thyroid was administered in combination with a meat diet, but only when the dogs were fed with soups. He also states the fact that the days when there was sugar in the urine there were less unoxidated substances than on other days, showing that the glycosuria can not be attributed to any lack of oxidating energy. Von Noorden asserts that the internal secretion of the thyroid prevents the formation of fat at the expense of the sugar; in other words, it interferes with one of the mechanisms that regulate the glycohemia, which ingenious hypothesis deserves to be verified. This fact that thyroid medication and hyperthyroidization favor the production of glycosuria renders especially remarkable the case reported by Branthomme of an arthritic diabetic improved by the ingestion of thyroid tablets, until now, a year later, there is no sugar in the urine, and merely traces of albumin. Lepine comments upon this case, remarking that if diabetes results from deficient nutrition, then thyroid medication accelerating tissue nutrition would affect it favorably, similarly to the beneficial effect attained in diabetes by d'Arsonval and Charrin with high frequency currents. De Renzi and Reale, on the other hand, have noted glycosuria follow the use of these currents, showing again the analogy between them and thyroid medication. Both accelerate tissue nutrition and thus might improve a diabetic, but more frequently they are injurious, as they stimulate denutrition to such an extent. Lepine concludes by reporting the case of an obese diabetic he is treating with the thyroid medication. At first the sugar was increased, but in a few days it began to show a constant decrease. Intercurrent erysipelas interrupted the treatment, which he intends to resume later.—*Semaine médical: Journal of the American Medical Association.*

Auscultation of the Mouth,

Professor Galvagni calls attention to the valuable information to be derived by auscultation of the mouth in regard to incipient tuberculosis, etc. The rales are reflected from the bucco-pharyngeal cavity as from a sounding-board. He also notes a peculiar jerky glottic sound, not in the inspiration, but commencing in the pause, attaining its height about the middle of expiration, diminishing and vanishing completely at the commencement of the inspiration. It coincides wth the rhythm of the pulse, and has been noticed in several tuberculous patients, and in one case of gastralgia of uterine origin.—*Journal of the American Medical Association.*

Salipyrin in the Treatment of Influenza.

Békéss (*Wiener medicinische Presse*, August, 15, 1897). remarks that the treatment is mostly symptomatic. In the beginning, as in all infectious diseases, he gives a laxative, preferably calomel, in doses of from two to five grains for adults (one-tenth the amount for children). The calomel is divided into three powders, given at intervals of an hour. As long as the fever lasts, rest and a fever diet are indicated. Formerly he gave internally, three or four times daily, three grains of quinin, four grains of acetanilide, from ten to fifteen grains of antipyrin, and from ten to fifteen grains of sodium salicylate.

Since 1890, however, he has used salipyrin almost exclusively, not only in influenza, but also in ordinary catarrhal affections, rheumatism, and neuralgia. He prescribes as an evening dose fifteen grains (seldom twenty to thirty grains), and as a morning dose generally half that amount, although at times he gives from ten to fifteen grains. For children he prescribes from one-tenth to half these doses, according to age. He has never noticed any unpleasant after-effects from its use, and has never been compelled to resort to larger doses than those mentioned. With this remedy he has obtained, without a doubt, the best results, and now and then they have been almost phenomenal in character. He has noticed, like von Mosengeil, that the use of salipyrin must be continued for some time in order to achieve a good result. He prescribes ten grains at night for from three to five days after the fever has disappeared. Even after the temperature has fallen to the normal the patient should be confined to his room for a number of days. The complications are to be treated by the usual accepted methods of therapeutics. —*New York Medical Journal.*

Creasote in Chronic Constipation.

The objection to massage of the abdomen and electricity is that they are expensive and require much more time than many patients can give to them. Drugs are usually too powerful, and, once their action is exhausted, are apt to leave the patient more constipated than before. A physician residing in Paris, Dr. Vladimir de Holstein, claims that a sat-

isfactory result may be obtained by administering creasote. This drug should be given pure, and not, as usually is done, in alcoholic solutions or in pills. Seven or eight drops should be given twice daily, after a meal, in a glass of water or any other liquid. If the dose is found not to act, it should be increased. Inasmuch as the patient may complain at first of the burning caused by the creasote, it is often well to begin by a smaller dose—say one drop daily—increasing daily by one drop until the desired result is obtained. Not only is constipation done away with, but the appetite increases and the general condition is improved. This treatment should be continued for several months. Dr. Vladimir de Holstein thinks that creasote does not act as a purgative, but neutralizes some intestinal toxin which causes paresis of the intestinal tube.—*Therapeutic Gazette.*

Some "Don'ts" About Heart Disease.

Don't feel called upon to give digitalis as soon as you hear a murmur over the heart. Study and treat the patient not the murmur.

Don't conclude that every murmur indicates disease of the heart.

Don't forget that the pulse and general appearance of the patient often tell more than auscultation.

Don't neglect to note the character of the pulse when you feel it. Possibly you may look at the tongue to satisfy the patient; feel the pulse to instruct yourself.

Don't think every systolic murmur at the apex indicates mitral regurgitation; every systolic murmur at the aortic interspace, aortic stenosis. The former may be trivial; the latter may be due to atheroma of the arch of the aorta.

Don't say every sudden death is due to heart disease.

Don't forget that the most serious diseases of the heart may occasion no murmur. A bad muscle is worse than a leaky valve.

Don't examine the heart through heavy clothing.

Don't give positive opinions after one examination.—*Philadelphia Medical Journal.*

Diuretin in the Treatment of Acute Nephritis.

Theobromin and sodium salicylate, known as diuretin, is commonly prescribed as a diuretic in cardiac dropsy, but is much less frequently used in acute nephritis. A German practitioner, Dr. Steiner (Rosenberg), reports having obtained good results from this drug in acute renal inflammations. He prescribed it in the following manner:

Diuretin,	5 to 6	(ʒi.-iss.)
Water,	180	(ʒvi.)
Syrup,	20	(ʒv.)

Mix: One teaspoonful every hour.

This medication, in all cases in which it has been tried, improved the dropsical phenomena and brought on diaphoresis, owing to the sodium

salicylate entering in the composition of diuretin. Dr. Steiner believes, indeed, that this drug may with advantage take the place of all other diaphoretic agents commonly employed in cases of acute nephritis. — *Medical Review of Reviews.*

Treatment of Eczema by Picric Acid.

Brousse (*Journ. de méd.*, October 10, 1897) recommends picric acid in acute eczema, either primary or occurring in a chronic case, especially with a tendency to epidermic ulcerations, and in the infantile seborrhœic or impetiginous eczema. A saturated solution of picric acid is painted on the affected parts, extending slightly beyond the affected area, which is covered with a compress soaked in the same solution, and then with wool. This is allowed to remain for two days. The skin should be previously cleansed with an antiseptic to prevent suppurative organisms from affecting the diseased skin during the time of treatment. This treatment is contra-indicated in chronic cases, and generally where there is epidermic thickening. The staining of the picric acid may be removed by washing with a saturated solution of lithia carbonate.—*Albany Medical Annals.*

Ergotin and Gallic Acid in Nephritis.

Pulvirenta gives the following prescription:

Rx.	Ergotin,	5
	Acidi gallici,	8
	Ext- et pulv. rad. rhatan.	3
M.	Fiat pil. No. xxiii.	
Sig.	One pill to be taken four times a day.	
Rx.	Ergotin,	2
	Acidi gallici,	4
	Saccharin,	0.0
	Muc. gum. arab.,	200
M.	Sig. Teaspoonful to be taken twice daily.	

These drugs are vascular astringents, and therefore diuretics. Like cantharides, they are contra-indicated when cardio-vascular compensation is efficient and diuresis copious.

They can only be of use when arterial tension is low, dropsy urgent and urine scanty. Even here they should be combined with cardio-vascular stimulants, such as digitalis, squill, strophanthus and strychnia, otherwise there is danger of over-taxing the heart by increasing its labor. —*Treatment.*

Treatment of Peripheral Neuritis by Alternating Currents.

Regnier (*Arch d'Elect. Med.*, September, 1897) records satisfactory results in nine cases of peripheral neuritis (four of which were due to lead, one to alcohol, and one to trauma) treated by alternating currents. A large indifferent electrode was placed on the back of the patient and

a small active one moved along the course of the affected nerves and muscles, remaining two minutes on each. The current was obtained from the central station at Paris, and the author finds that, if good rheostats are employed, it is well borne by the patients; he thinks that the danger of such alternating currents may have been somewhat exaggerated. The effect of these currents upon the nerves of sensation is much less marked than that of faradic currents; an electromotive force of 10 to 12 volts could thus be used with them which would have been intolerable with faradism. The mechanical effect is described as being as energetic but less brutal than that of faradism; the redness of the skin is similar to that observed with faradism, but is not painful and only lasts ten or fifteen minutes. Regnier comes to the important conclusion that the action of alternating currents resembles, without being identical with, that of galvano-faradisation. —*British Medical Journal.*

The Treatment of Chlorosis.

The following efficient formula in the treatment of anemia and chlorosis is designed for children over fifteen years of age. Take half the dose for children of five to fifteen years, and a quarter dose for children under five years. There is said to be no harm in overdosing for about twenty per cent. of ferratin is absorbed and the balance is promptly excreted, without deranging the stomach and without causing constipation.

Ferratini,	15.0
Natr. bicarbon.,	9.0
Sacch. alb.,	15.0

M. f. pulv., No. xxx.—Take a powder three times a day in a glass of sweetened water.—*Archives of Pediatrics.*

INTERNATIONAL MEDICAL MAGAZINE

An Illustrated Monthly of Medical and Surgical Science.

Edited by
WALTER L. PYLE, A. M. M. D.

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To the Class of 1898.

It is the custon at this season, to extend a greeting to the men who have just been recruited into the medical profession and to add to the welcome, some words of advice. Obviously, such a custom cannot be followed out in successive years without more or less repetition of the same thoughts, hence no apology is needed if our older readers find that we arouse a recollection of past editorials.

The class of 1898 represents better equipment than was possessed by most of those who are now bearing the burden and heat of the day. Except in a few colleges of no reputation bars have been put up against the illiterate and the imperfectly educated. Medicine is becoming once more a learned profession. In addition to the insistance on preliminary education, the requirements in medical study alone are about twice what they were ten years ago, while clinical instruction has been increased tenfold. The incoming class has also been subjected to rigorous sifting by impartial State Boards—a procedure that has been in vogue for only a few years.

With thus much of a laudatory nature, we may be pardoned for calling the attention of the recent graduates to various practical points with which they are necessarily unfamiliar and which may serve to remove

the impression of inferiority of the existing medical profession. While it is only recently that American physicians have been required to be educated men, a great many have always been so from choice, and many others entering the medical school without proper training or proper realization of the wrong they were committing by striving to enter a profession which they were not able to honor, have made up past deficiencies by private study. So far as strictly medical training is concerned, college instruction can never be more than preliminary, for only constant study can keep one abreast of medical progress. Thus, the two or three-year man who has been graduated ten or twenty years may be far ahead of the recent four-year graduate, and, on the other hand, the physician who regards his college course as the completion of medical training will soon be left behind in the race and it makes comparatively little difference whether he has been obliged to study for two or four or five years. Again, there is more or less practical weeding out of the incompetent by the test of actual practice, and this approximates the function of State Boards. Still, of the sixth or seventh of the medical graduates who soon drop out of practice, a considerable number who are professionally well qualified to continue in the profession, do so from choice or from premature discouragement or on account of bad health.

It may be well to remind the recent graduate that there is no place for him except as he makes one or influential friends make one for him. It will require at least five years to create what may be considered a vacancy in the medical profession. Given a man of average ability with average good fortune in store for him, and the soundest advice which can be given him from the purely business standpoint is to drop the practice of medicine for any honorable position which will pay him, on the average throughout life, fifteen hundred dollars a year. Some would substitute a thousand dollars for fifteen hundred, but we prefer to be conservative. Counting the cost of living and office expenses and the impossibility of attention to investments, a gross medical income of twenty-five hundred is about the same as a salary of fifteen hundred. But we suppose that most of the year's graduates, about eight thousand, will declare that the attractions of medical life more than compensate for the lack of commercial advantages, and to such we extend the warmest greetings, our words of discouragement being intended to deter only those who regard practice as a livelihood, and are not particularly attracted to it by sentimental motives.

Even to those who have finally decided to live by the practice of medicine, the lack of demand for their services is a matter for serious consideration aside from the financial aspect which will soon enough force itself upon their attention. There is already enough and more than enough of mere doctors. Success depends upon individual effort, ability and faithfulness. It is useless to expect more than a pittance if the central idea of one's life is that the world owes every man a practice who has graduated from a medical college. Only the most meagre recompense can be expected by the man who is afraid of competition and who is seeking a place where he can be safe from the inroads of professional rivals. Much can be learned from the precept and experience of those who have gone over the ground in advance of the new-comer, but mere imitation of older practitioners is worthless. No man can really change his identity nor appropriate the mannerisms and habits of another. Much will be pardoned on the ground of personal peculiarity; the physician may be a dandy or careless about his dress, short or tall, dignified or jovial, bearded and mature or smooth-faced and youthful, and yet he may succeed. The mistake is in thinking that he is lifted up by these peculiarities. To the beginner in medical practice, then, our advice is to be what nature and education has made you. Do not copy some one else, do not expect to shine by reflected light, do not waste your time and energy in lamenting that you are not as other men are, for that is worse than pharisaic. Do your duty according to your own methods, and, while remembering that originality and crankiness are not synonyms, resolve to make your own place in the medical world.

* * *

A Little Sermon.

"Blessed are the Poor in Spirit"—This Beatitude seems to apply directly to the dispensary evil—for the dispensary frequentors are not, we understand, financially poor, so they must be poor in some other way: poor spirited, willing and eager to assume the poverty that their bodily surroundings do not warrant. So they make themselves speciously poor. And what is their reward? We are told that "they shall inherit the Kingdom of Heaven." Anything else? For they evidently have the most good of the earth. For them hospitals bud and blossom and specialists slave and smile, nations are taxed, legislators appropriate. Why may *we* not all be "poor in spirit," since the prize is so great? But where actual poverty overwhelms the medical practitioner, is he then

not poor in spirit too? He is meek, you suggest, and "the meek shall inherit the earth," but his meekness must strike a false note, for he seems to inherit the almshouse. Let him alter his ways and reconsider. If he were truly poor in spirit he would realize that he is all-unworthy to attend gratuitously those grand and gaudy creatures who stalk with supercilious air and conscious superiority through his clinic and dispensary rooms, and he wouldn't do it any more, and then—ah! then, he too, might inherit something—his rich aunt might die!

BOOK-REVIEWS.

THE NERVOUS SYSTEM AND ITS DISEASES: Diseases of the Brain and Cranial Nerves, with a General Introduction on the Study and Treatment of Nervous Diseases. By Charles K. Mills, M. D., Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania; Clinical Professor of Neurology in the Women's Medical College of Pennsylvania; Professor of Diseases of the Nervous System in the Philadelphia Polyclinic; Neurologist to the Philadelphia Hospital; Honorary Fellow of the Pittsburg Academy of Medicine, etc. With 459 illustrations. 8 vo., pp. 1056. J. B. Lippincott Company, Philadelphia, 1898.

This book will doubtless obtain a favorable reception, for the severest critic must acknowledge that it has been carefully written. The main title indicates the scope of the work in its complete form. The author has made no attempt to write a quiz compend or condensed manual, but he presents to us many of the most important facts bearing on neurology in its relations to physiology, anatomy and allied sciences. No physician can diagnosticate nervous diseases without a knowledge of the anatomy and pathology of the nervous system, and we trust that we are approaching the end of that period in which "some sclerosis of the oblongata" is regarded as a sufficient diagnosis. The author of this work has fully realized that the subjects included under neurology are difficult. He has selected those facts which every physician must know in order to understand the affections of the nervous system, and even the neurologist will find that he can learn much from the pages of this book. Compound words have been avoided wherever practicable.

The sections on apoplexy and brain tumor are thorough. The differential diagnosis between hemorrhage, embolism, and thrombosis is never easy, but the distinguishing points have been set forth with great clearness in a carefully prepared table. Nevertheless, the physician will meet with cases in which he will be unable to make a positive diagnosis.

In his classification of tumors of the brain the writer includes gliosarcomata. This is in accordance with the writings of many, but the tendency of the day is to reject this term. Atrophy of the brain may be congenital, but we believe that most of these are cases of hypoplasia.

Dr. Mills has wisely divided the auditory into the cochlear and the vestibular nerves. This is in keeping with recent anatomical views. These two nerves have probably very different functions, the cochlear is doubtless concerned with hearing and the vestibular with equilibration. A special chapter has not been devoted to

vertigo, but here, as elsewhere, the attempt is made to associate clinical symptoms with anatomical structure. The most common cause of vertigo is disease of the vestibular apparatus, for vertigo is a "sense of disturbed equilibration.,' Many of the vertigoes not due to actual disease of this apparatus are believed to be caused by indirect involvement of it. Attention is called to the affections of the vestibular nerve in tabes. Too often the tabetic involvement of the nerves of hearing, equilibration, taste and smell is over-looked, and careful examination would probably more frequently reveal disturbance of their spencial senses in tabes.

Dr. Mills, like most neurohistologists, is unable to support Koelliker's views regarding total decussation of the optic nerves in man, and one can only wonder that this great German histologist has been impelled to advance views so radically opposed to the opinions of nearly all investigators. No statement made within the past few years has called forth more opposition than this one of Koelliker, which has fairly divided with the views of Flechsig the claims for general criticism.

The portion of the book devoted to the visual centres and tracts is of great interest on account of its value in diagnosis. It is equally important to the ophthalmologist and the neurologist.

The sections on taste will arouse criticism, for our views on the subject are not thoroughly grounded at present, and there is latitude for individual opinion. All neurologists are not willing to make the glossopharyngeus so important in this function of taste as Dr. Mills has done, and yet the latter has sought anatomical facts, and not mere theories, for his statements.

A diagram, showing the olfactory tracts, has been modified from Edinger and Koelliker. This is a difficult portion of human anatomy, and there is room for much investigation in this field. This diagram on page 671 will satisfy the most skeptical in regard to the complexity of the olfactory tracts within the cerebrum.

Photographs of patients are used to illustrate the different diseases, a hospital and private practice extending over a period of many years having furnished the author with almost all that could be desired of this character.

Paralysis of the soft palate is regarded as probably due to disease of the vagus, and the view presented that the seventh nerve does not supply the soft palate, is certainly gaining ground.

The bibliographic index shows that the author has drawn from the literature of many countries, not neglecting American neurological contributions.

We are a little surprised to find the subject of aphasia crowded into a somewhat narrow compass, but this is doubtless due to an attempt to avoid giving it undue prominence, especially as the author has written so extensively on this important topic elsewhere.

We cannot do justice in a short review to a work of this magnitude. It will be read; its merits will demand attention, and the most we can hope to accomplish is to speak a feeble but hearty word in its praise.

Dr. Mills states in the preface that it is his intention, unless prevented by circumstances, to follow the present volume with another which shall include the remaining diseases of the nervous system, insanity, and the medical jurisprudence of both nervous and mental diseases. If this intention is realized it will make the work the most complete of its kind in the language.

Too much cannot be said of the careful proof-reading and general make-up of the book.

Atlas of Internal Medicine and Clinical Diagnosis. By Dr. Chr. Jacob, of Erlangen. Edited by Augustus A. Eshner, M. D., Professor of Clinical Medicine in the Philadelphia Polyclinic; Attending Physician to the Philadelphia Hospital. 182 colored illustrations upon 68 plates, and 64 illustrations in the text. Philadelphia. W. B. Saunders, 1898. Price, $3.00 net.

This is the initial volume of Mr. Saunders' English edition of the world-famous Lehmann medicinische Handatlanten, and we are immediately struck by its evident superiority in typography, illustration, paper, binding, etc., over the English reproduction of the previous volumes. The great value of rational illustration in technical subjects is indisputable. For lasting and practical knowledge, one accurate illustration is worth several pages of dry description. As a substitute for large clinical observation, only available to hospital workers, these atlases are invaluable. If the volumes to follow are of the same standard of worth and as proportionately cheap as the forelying book, we predict a large sale for the whole series.

Dr. Jacob has divided his book into two major parts. The first portion consists of the plates with their accompanying descriptions, which are wisely placed opposite the plates, so that when the book is open there is no necessity of turning a page to find an explanation to the figures. The plates include clinical microscopy, chemic color-reactions, the normal projection of the viscera and percutory topography, schemata of diseases of the lungs and heart, and diagrammatic representation of abdominal diseases. The second portion of the book is devoted to an epitome of clinical diagnosis. Section I considers the examination of the patient; Section II, general considerations upon the methods of examination; Section III, special diagnosis of diseases of the internal organs; Section IV, special pathology and treatment; Section V, therapeutic and dietetic notes.

Dr. Eshner, the editor-translator, has given a free rather than literal translation, his endeavor evidently being to convey the spirit of the German original rather than the language. Every page of the text bears evidence of his careful editing, and the fact that the original is in a foreign language need never be a matter of regret. The book should be in the hands of every worker in clinical medicine, whether student or practitioner.

RETINOSCOPY (or Shadow-Test) in the Determination of Refraction at One Meter Distance, with the Plane Mirror. By James Thorington, M. D., Adjunct Professor of Diseases of the Eye in the Philadelphia Polyclinic, etc. Second edition. Philadelphia. P. Blakiston. Son & Co.

The call for a new edition within a year is an additional testimonial to the superlative merit of this practical little book. Retinoscopy with the plane mirror at one meter distance as practiced by Dr. Thorington is certainly the most accurate objective method of determining Refraction, and the author has described the minutest details of his mode of procedure in the most lucid manner, and with a degree of simplicity worthy of emulation by other writers on technical subjects in ophthalmology.

The book is fully and appropriately illustrated, many new cuts, 12 of which are are in colors, being added in the second edition. A description and drawing of three lenses suggested by the author for the study of the scissors-movement, conic cornea, and spheric abberation on the schematic eye, have also been inserted.

THE MENOPAUSE. A Consideration of the Phenomena which Occur to Women at the Close of the Child-bearing Period, with Incidental Allusions to their Relationship to Menstruation. Also a Particular Consideration of the Premature (especially the Artificial) Menopause. By Andrew F. Currier, A. B., M. D., New York. 12mo. 284 pages. Cloth, $2.00. Publishers, D. Appleton & Company, New York, 1897.

This little book presents a neat appearance; the paper and printing are good, and the subject matter carefully classified. There is much in it of interest to the general practitioner as well as to the gynecologist. The author impresses upon us that "the menopause is not a dangerous time or experience for the majority of women, and that there is no such thing as climacteric disease."

In Chapter V the causes and various phenomena accompanying premature menopause are given. The author thinks ovariotomy in young women will not destroy their sexual appetites and that there should be no hesitation on this account when an operation is indicated. In the last chapter the treatment and indications for treatment during the menopause are very concisely and clearly outlined.

THE APHASIAS AND THEIR MEDICO-LEGAL RELATIONS. By F. W. Langdon, M. D., Cincinnati. pp. 42. Norwalk, Ohio, 1898.

This monograph is a paper read before the Ohio State Medical Society, at its fifty-second annual meeting, at Cleveland, Ohio, May, 1897. The subject is considered systematically and is illustrated by a number of schematic figures which make clear the text. In this way twenty-eight forms of aphasia are analyzed. The essay furnishes a basis on which the legal status of aphasics may be discussed. The author maintains that any legal document should be recognized when it can be proved that the person making it is sane and can understand fully its nature by any receptive channel, whether by hearing, vision or muscular sense, and can in addition, express assent or dissent with certainty to proper witnesses, whether this expression be by spoken speech, written speech or pantomime.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION. TWENTY-NINTH ANNUAL SESSION, 1897.

Twenty-four papers are included in the volume. The Secretary, Dr. H. A. West, of Galveston, reports 356 members on the roll. Quite an interesting discussion arose in connection with a paper entitled "Hotchpotch," but by a printer's blunder called "Hopscotch," in the list of contributors. The author, Dr. J. H. Sears, of Waco, who has practiced for forty years in Texas, discusses the continued fevers met with in the South. He considers them chiefly malarial and gives heroic treatment by "quinine, from thirty to sixty grains a day, continued from seven to thirty or more days, if necessary." The Doctor sticks to his faith and practice as faithfully as Rush did to his, and he seems to have had a successful experience.

MEDICAL NEWS AND MISCELLANY.

Dr. Gayraud, sometime Agrégé Professor of Surgery in the Medical Faculty of Montepellier, a former President of the Montepellier Academy of Science and Letters, and author of several important articles in Dechambre's *Dictionnaire Encyclopédique des Sciences Médicales*, is dead.

A Prize of $10,000 is offered by the Belgian Government to anyone who invents a chemical that will replace phosphorus in the making of lucifer matches. This action has been prompted by the numerous cases of phosphorus poisoning and necrosis among the workers in Belgian match factories.

Dr. Unna offers a Prize of $150 for the best essay on the subject: "Whether, and to what extent, the specific stains for elastin are appli-

cable in the case of elacin." Essays must be in the hands of Leopold Voss, Hohe Bleichen 34, Hamburg, by December 1, 1898.

The Monetary Loss by Typhoid Fever.—An enthusiastic statistician in the United States has lately taken the trouble to make an elaborate calculation as to the annual cost of typhoid fever in that country. This person, who exhibits an immense amount of misdirected energy, estimates that there are in the United States 400,000 cases of typhoid fever annually, with a mortality of ten per cent., an average sickness of twenty-eight days making 11,200,000 days of sickness, an enforced idleness of at least one month, meaning, at wages of, say, 2s. (50 cents) a day, £3 ($15.00) at the lowest, and with six to eight weeks' sickness at ordinary wages, averaging at least £10 ($50.00.) Estimating the doctor's bill at £12 ($60.00), and adding the cost of medicine, ice, delicacies, and the wages of trained nurses in city cases, he makes the annual cost of typhoid fever amount to £13,200,000 ($66,000,000)—a prodigious total certainly. —*Health.*

Medical Etiquette in China.—Chinese doctors are said to be even more scrupulous than their white brother practitioners in regard to the nice points of professional etiquette. Indeed, if report be true, this honorable custom is at times carried to very inconvenient lengths. The following amusing tale is related in an English journal, which, if not veracious, is at least *ben trovato:* "A Chinese gentleman was struck by an arrow, which remained fast in his body. A surgeon was sent for, and broke off the protruding bit of the arrow, leaving the point imbedded. He refused to extract it, because the case was clearly one for a physician, the arrow being inside the body."—*Medical Record.*

Transmission of Typhoid by the Air.—According to the *Journal d' Hygiène*, recent experiments have proved that the typhoid germ can be transmitted by the atmosphere. The germ preserves its vitality a considerable time, not only in damp surroundings, but in others apparently dry, such as linen, wood, earth, dirt, and refuse. By the process of desication the greater part of the bacilli perish. A few however, escape, and these may become a source of danger, not only by being transmitted by the surrounding air, but also because imperceptible fragments containing them, by being brought into contact with the buccal mucous membrane, either from fingers, food, etc., produce infection.

The Use of the Kinematograph in Medicine was demonstrated at one of the Berlin Photograph Societies recently. It is clear that "animated photographs" of the abnormal movements characteristic of certain

diseases must be useful to physicians, not only as documentary evidence, but also for purposes of study, as by their help any phase of the movement in question can be examined separately and at length. The series shown in Berlin represented the walk of a case of tabes dorsalis, and the negative had been taken in Professor Mendel's clinic.—*British Medical Journal.*

Child Life Insurance, a Juror's Statement.—The following incident illustrating the methods of child life insurance agents is taken from an English paper:

At an inquest on a baby at Newington recently held, the coroner asked the witness if the child was insured.

Witness—"Gracious me, no; it's only eleven days old!"

Coroner—"That's nothing; some mothers insure their children before they are born."

Witness—"Rather rough, isn't it?"

A Juror—"That's quite right. I've known insurance agents who have had the tip to wait at people's door till the child was born.—*Boston Medical and Surgical Journal.*

Anton Czechow, the most widely read of modern Russian novelists, is a practicing doctor. At a very early age he published humorous sketches and physchologic studies remarkable for maturity of thought and style. His *Windbags*, *Waldoga the Great and Waldoga the Little*, and *Ariadne* appeared in 1896 and 1897, following rapidly on *Russian Love*, volume of short studies, which, in a translation, enjoys an immense popularity in Germany, and has run through several editions. His latest novel, *The Peasants*, caused a great sensation in St. Petersburg. In it the Russian peasantry are painted with a realism as ruthless as the French peasants are portrayed in Zola's *La Terre.*—*Phila. Medical Journal.*

Sex and Population.—The London *Post* in the turbulent wake of the statistician gives some space to the disparity of the sexes, but wrongly credits Egypt as being the only country of the world where the men exceed the women. The avowed number foots up as high as 150,000. Let us dip into the question somewhat. The alleged preponderance of men in the United States is held to be 1,513,510, and in Australia the comparison suffers still more. But by the last Italian census, certainly the most accurate of all, the excess of male over female inhabitants is in the proportion of 15.20 to 49.80. In Greece the percentage of male inhabitants is higher even than it is in Italy, and so it is, too, in Servia and Roumania. In all the South American countries, with the exception of Chile and Venezuella, men outnumber the women, and this is particularly the case in Brazil and in the Argentine Republic. In England's South

African Colonies, in India and in Canada, as well as in Egypt, the number of male inhabitants exceeds the number of female inhabitants. Egypt's claim to any particular prominence in this matter is based on a very slender foundation at best. By the census previous to the last one it was shown that the total number of male inhabitants was 3,402,000 and the number of female inhabitants was 3,416,000. In a population, therefore, of nearly 7,000,000, the excess of female inhabitants at that time was 14,000, and if since then the scale has been turned slightly and now shows a small preponderance of men, there is certainly nothing in it which particularly calls for any great demonstration of surprise. The only commentary after all seems to be that the masculine element is reasonably content with an unembarrassed struggle for existence.— *Journal of the American Medical Association.*

Chloroform Anesthesia by Gaslight.—An unusual accident recently happened in the Catholic Hospital at Herne, in Westphalia. A man who was shot in the abdomen was brought to the hospital at night and immediately operated upon by gaslight. The operation was very difficult, and the chloroform narcosis was kept up for four hours. As a result of the decomposition of the chloroform by the gaslight, producing powerful chlorinated vapors, two of the surgeons and several of the Sisters of Mercy were overcome, and one of the latter has since died.—*Medical News.*

The Cataract of Glassblowers.—J. Hirschberg in the *Berliner klinische Wochenschrift*, comments upon the connection between cataract formation and occupations entailing exposure to intense heat as well as residence in hot climates, as having been long recognized. He contrasts the early age of the glassblowers so affected with the late visitation upon the subjects of senile cataract. This difference, the writer says, ranges from forty years in the former class to that of sixty years in the latter. The heat exposures in India yield similar results of what might be styled as traumatismal. The late Dr. C. B. Agnew, of New York, was wont to cite cooks and stokers as his classical examples, but claimed that glare rather than heat was responsible for the result. Also in the ante-specialistic days, Dr. Willard Parker gave the dark-eyed as the preferred victims and females as the more constant sufferers. Thus there was no lack of observers, although on somewhat divergent lines. Racial peculiarities of the darker skinned with their more torrid environments and heated apartments, with the eye strain of sewing, minute writing, etc., may be in reality the secondary developers. In this connection a well-known ophthalmologist of the Atlantic slope unhesitatingly maintains that but few over fifty years of age can be said to be immune from the cataract disqualification. To his mind the question, one of degree solely, belongs

to the domain of prognosis rather than that of diagnosis. Might it not be said that the centrifugal influence inherent in all animals operate in the eye uniformly with the determination of pigmentary and like deposits to the surface? The phenomenon is most readily observed in transparent media and at the points of least resistance. The elaboration of the theory, however, is rather vague and better classifications may be more instructive in what are rated as the higher circles of civilization. Until then hygienic preventives will avail but little, although investigations are exceedingly fascinating. At all events let our statistics be free from prejudice and hasty conclusion.—*Journal of the American Medical Association.*

Artificial Fecundation Before the Inquisition.—Artificial fecundation is not a subject which is generally looked upon as within the sphere of practical medicine in this country. It is known to have been practiced on one occasion by John Hunter, and some cases are reported by Marion Sims in his *Clinical Notes on Uterine Surgery*, but the bulk of such literature as there is on the subject is French. The recent death of Dr. J. Gérard recalls a half-forgotten scandal in connection with this matter which occured in Paris about thirteen years ago. Dr. Gérard who was a man of splendid physique, had served in the Cent Gardes under the Second Empire. At the age of 40 or thereabouts he turned his attention to medicine, and with the most determined perseverance passed all the literary and scientific exaninations required for the doctor's degree. When the time come for the presentation of his thesis, in 1885, he offered an essay entitled (A. CONTRIBUTION TO THE HISTORY OF ARTIFICIAL FECUNDATION.) The subject had been approved by Professor Pajot, who had signed the thesis as President, but while it was being printed the Faculty became alarmed, and ordered the printing to be stopped and all the copies already in type to be destroyed without leaving even one for the author. Gérard was, however, able to rescue a duplicate set of proofs with which his cook was about to light her fire, and the essay was published, but only some months later when Gérard had presented himself with a thesis on another subject, and had been duly pronounced (DIGNUS INTRARE IN NOSTO DOCTO CORPORE.) The condemned thesis was of little account from a scientific or any other point of view; but, it is almost needless to say, an attempt was made to represent Gérard as a martyr to the foolish prudery of the Faculty. Not long before the incident which brought his name prominently before the public, however a French law court had shown itself equally unsympathetic on the same subject. On the 23rd of August, 1883, the Bordeuax tribunals, in giving judgment in a case, declared that the practice of artificial fecundation was a veritable danger to society, and could not be recognised as a legitimate form of medical practice. Thus condemed by Law and Physic,

artificial fecudation has now come under the ban of the Church. The question having been referred to the highest ecclesiastical tribunal in the Roman Church, it has been decided by the Holy Office that the practice is unlawful. We give the text of the decision as a curiosity :

"Feria IV, die 24 Martii, 1897

"In Congregatione Generali S. R. et U. I. habita coram Emis. Rmis. DD. Cardinalibus contra hæreticam pravitatem Generalibus Inquisitoribus, proposito dubio

"An adhiberi possit artificialis mulieris fœcundatio?

"Omnibus diligentissimo examine perpensis præhabitoque

"DD. Consultorum voto, iidem Emi. Cardinales respondendum mandarunt:

"*Non licere.*

"Feria vero VI, die 26 ejusdem mensis et anni, in solita audientia R. P. D. assessor: S. O. impertita, facta de suprascriptis rccurata relatione SSmo, D. N. Leoni, Papæ XIII, Sanctitas Sua resolutionem Emorum. Patrum adprobavit et confirmavit.

"I. Can. Mancini S.R., et U, I. Not."

It is curious enough to find law and medicine agreeing on a scientific question. but it is still more curious to find the medical faculty of Paris, which is hardly remarkable for orthodoxy, in complete harmony with the Holy See.—*British Medical Journal.*

Discovery of Dwarf Races in South America.—The news has just been brought from South America of the existence of a remarkable race of pigmies in the neighborhood of the upper Amazon. A Mr. Sullivan, of Boston, has been travelling in unfrequented parts of the South American continent, and finally arrived at the headwaters of the Rio Negro, which mingles with the tributaries of the Orinoco in Guiana. Mr. Sullivan says: "I met with, while on the Rio Negro, one of the tributaries of the upper Amazon, a race of remarkably small people, who were more likely of an Indian than a negro origin, judging from their hair and the peculiar color of the skin, which was of a brilliant reddish-yellow. They are very ugly in shape. Their stomach, which is distended in the back as well as in front, is big and out of all proportion to their tiny, spindling arms and legs. From inquiry it appears, as nearly as could be ascertained, that their home was at the headwaters of the Orinoco, or else that part of Venezuela near the Brazilian border or Rio Negro watershed. These people are not over four feet eight inches in height, and the woman are less than this. They all appeared to be of the same race, and give the same location as their home." This discovery, if authentic, and there seems to be no doubt of its genuineness, should be of the greatest possible value to anthropologists. Humboldt, in the beginning of the century, recorded the tradition of a race of dwarfs inhabiting parts of South America, and stated that these pigmies were supposed to dwell in the country at the head of the Orinoco; but, as he did not visit these regions himself, concluded that the rumors were without foundation. Mr. Sullivan's observations curiously verify Humboldt's suppositions, and should go far to clear up the point as to the existence of numerous pigmy tribes in Guiana and Venezuela.—*Medical Record.*

The proportional distribution of physicians throughout the different sections of the United States has been tabulated as follows by the *Virginia Medical Semi-Monthly*. The estimate is based on a population of sixty five millions for the whole nation.

State.	Population.	Number of Physicians.	Ratio of Population
Alabama	1,513,017	1,609	1 : 940.3
Alaska	32,052	5	1 : 6,410.0
Arizona	59,620	95	1 : 638.1
Arkansas	1,128,130	1,841	1 : 558.5
California	1,208,130	3,152	1 : 383.4
Colorado	412,198	918	1 : 449.0
Connecticut	746,258	1,239	1 : 666.9
Delaware	168,493	239	1 : 704.5
Dist. of Columbia	230,392	857	1 : 264.2
Florida	391,422	764	1 : 512.3
Georgia	1,837,353	2,021	1 : 909.5
Idaho	84,385	109	1 : 772.3
Illinois	3,826,351	7,331	1 : 521.9
Indiana	2,192,404	4,778	1 : 458.8
Indian Territory	172,321	291	1 : 592.3
Iowa	1,911,896	3,400	1 : 562.4
Kansas	1,427,096	2,210	1 : 645.9
Kentucky	1,858,635	3,104	1 : 598.8
Louisiana	1,818,587	1,460	1 : 766.2
Maine	661,086	1,164	1 : 567.9
Maryland	1,042,390	2,003	1 : 520.4
Massachusetts	2,238,943	4,032	1 : 555.2
Michigan	2,093,889	3,730	1 : 561.3
Minnesota	1,301,826	1,576	1 : 826.0
Mississippi	1,289,600	1,397	1 : 943.3
Missouri	2,679,184	4.736	1 : 565.7
Montana	132,159	247	1 : 575.5
Nebraska	1,058,910	1,595	1 : 663.8
Nevada	45,761	48	1 : 953.3
New Hampshire	376,530	669	1 : 562.6
New Jersey	1,444,933	1,844	1 : 783.5
New Mexico	153,593	97	1 : 1,584.5
New York	5,997,853	11,132	1 : 538.7
N. Carolina	1,617,947	1,358	1 : 1,191.4
N. Dakota	182,719	203	1 : 900.1
Ohio	3,672,316	7,575	1 : 484.7
Oklahoma	61,833	326	1 : 189.7
Oregon	313,767	653	1 : 480.5
Pennsylvania	5,258,014	8,436	1 : 623.0
Rhode Island	345,506	543	1 : 536.3
S. Carolina	1,151,149	1,060	1 : 991.7
S. Dakota	328,808	364	1 : 903.4
Tennessee	1,767,518	3,079	1 : 574.0
Texas	2,235,523	4,617	1 : 484.2
Utah	207,905	254	1 : 818.5
Vermont	332,422	626	1 : 531.0
Virginia	1,655,890	1,978	1 : 847.3
Washington	349,390	650	1 : 537.5
W. Virginia	762,794	1,236	1 : 536.4
Wisconsin	1,686,880	1,674	1 : 854.9
Wyoming	60,705	60	1 : 1,011.7

Popular Superstitions Relative to Menstruation.

Laurent ("Chronique medicale," December 15th, 1897) does not entirely disbelieve in certain ideas, popular amongst women in different countries, relating to menstruation. In the sugar refineries in the North of France the female hands are actually kept out of the premises when the

sugar is being boiled, and also when it is undergoing the process of cooling. The objection to women is that if one or more were menstruating the sugar would be blackened. A similar notion prevails in Cochin China in respect to the preparation of opium. Another doctrine, also common to Europe and Asia, is that the hands of a menstruating woman break objects of strength and toughness. Especially is this notion entertained in relation to stringed instruments. A performer on the double-bass at a theatre in Paris declared that if his wife touched one cord of the instrument during her "period" it snapped at once. Two young women, excellent violinists, informed Laurent that they never played when menstruating, as the snapping of cords interfered greatly with the performance. One of these ladies admitted that she was extremely nervous and irritable at the period. Several much more credible phenomena have been reported, and clearly come under the head of neuroses. Young girls sometimes acquire an idea that their clothes stick to them at the period. Such a person gets nervous during the catamenia, and trying to pull off a tight glove fails, and then believes that it sticks to her. Since she thinks that the same must be the case with her clothes, she loses the power as well as the will to pull them off. Laurent observed this in two sisters. Their body linen did not stick to the skin through perspiration or any visible cause, but it could not be taken off during a "period" till a servant pushed her hand between it and the skin.—*British Medical Journal.*

A Curious Case of Injury due to Lightning. is reported in the *Prager medicinische Wochenschrift* for February 10, 1898, by Dr. Edward Weisz.

The patient had been injured by lightning two years before his admission, and, according to his story, he was almost completely unconscious for three days, after which he gradually regained his powers but never perfectly. He was completely paralyzed for nearly three weeks, and even then required two months more to retain any power in walking. His hearing was also very defective in the left ear, though perfectly good previously The whole interior surface of the body and the inner surface of the left thigh and leg was deeply burned. Since the accident the patient had been able to do light work, but was compelled to stop work every month or so because of severe pain in his whole body and excessive weariness, which became more marked on any change of weather. At the time of his admission he was a moderately well nourished man, with no evident disease of the viscera. Over parts of the anterior portion of the body the skin was perfectly white, with well-marked elevations like those seen on the skin of a picked bird and with but a very few fine hairs. Below, on the inner surface of the thigh and leg, were broad parchment-like strips, the remnant of the old burns. Nothing else could be found, except an increased knee-jerk, some ataxia of the lower extremities, and a rather week hand grip. The hearing in the left ear was still very de-

fective. As it is well known, says the author, the effects of lightning are very various, at times simply destructive, without any great amount of heat generation. This case illustrates very well this combined action in the shock to the brain and the burns on the body, and an additional evidence is the partial melting of a coin carried by the patient. The other symptoms of the case seem to have been very proably functional, since they were much improved by hydroteerapeutic measures. —*New York Medical Journal.*

Juvenile Suicide.—Within recent years suicide has been greatly on the increase in all parts of the civilized world. In thirty American cities the number of suicides increased from 1826 in 1895 to 1999 in 1896; or at the rate of 9.8 per cent per annum. This increase is in itself most deplorable but is not the saddest feature in the present day tendency to self-destruction. This tendency is spreading at a rapid rate among quite young children. In this country suicide commences at a very early age. During the past ten years more than a thousand boys and girls below the age of sixteen years have taken their lives. In New York alone from the year 1871 to the year 1876 thirty-four boys and girls committed suicide, and since that date the numbers have relatively greatly grown. In some instances those who have put an end to their existence have been little more than infants. In Europe and in Great Britain a similar state of things exists. The reasons advanced to account for this wave of suicide are many. By some it is regarded as a natural sequence of the conditions under which civilized nations live nowadays. It certainly is true and proved by the history of ancient nations that the greater advance a race makes in civilization the more are its members given to self-destruction. Civilization and suicide seem to march hand in hand. The use of stimulating and narcotic drugs is responsible for some of the deaths. Poverty, ill-health and insanitary surroundings are also important factors. The sensational journals and highly spiced erotic literature of the day may be responsible for some of the cases of youthful suicide, although this explanation will not apply to the very young. However, it is plain that there is some cause or causes which drives persons to kill themselves much more frequently than formerly, and, without doubt, the reasons for the unfortunate prevalence of suicidal tendency are many and complex. It is impossible to point to one cause and say that here is the reason or even the chief reason for the suicidal epidemic.—*Pediatrics.*

Rome as a Health Resort. Dr. I. C. Rosse, of Washington, a well known traveler and and authority on climatology, refutes the idea that Rome is unhealthy and offers statistics to show that from a sanatarian's standpoint it is undoubtedly superior to any other European capital.

The Pharmacist as a Milk Dealer.—In a recent address to the students of the Philadelphia College of Pharmacy Dr. J. Madison Taylor,

Professor of Diseases of Children in the Philadelphia Polyclinic, urges that in view of their special training, pharmacists prepare and offer for sale sterilized cows' milk, and the different modifications of milk.

Physical Curiosities.—An editorial in the "Lancet" says: "Not the least interesting ferture of the colossal show organized by Messrs. Barnum and Bailey at Olympia is the collection of 'freaks' which the industrious managers have been able to get together One of these entertainers, whose name is Delno Fritz, is a sword-swallower, and asserts that he can swallow longer swords than have ever been swallowed before. We for our part never want to see anyone swallow more rigid metal. To those who know the surface markings of the abdomen and the situation of the stomach it is little short of appalling to see this man pass a sword down his gullet until the hilt impinges upon his teeth and then withdraw the weapon and demonstrate by outside measurement that in the erect posture the point falls some inches below the usual line of the lower curvature of the stomach. What really happens, of course, is that Delno Fritz has learnt, consciously or unconsciously, to stretch the somewhat loose and elastic tissues between the lips and the cardiac orifice of the stomach, so that these tissues will lie along his blunted sword in a condition of extension, while a protruded chin assists in the prolongation of the pharynx. It should be added that the solidity of the weapon with which the feat is performed is beyond question. A second person in whom medical men must be interested is one Young Hermann, who can expand and contract his chest and abdomen at will to really remarkable dimensions. He is able to make a bona-fide difference of sixteen inches in his chest measurements and accordingly to snap chains and straps fastened across his thorax by the steadily extending pressure he is able to effect upon them. The alteration which he produces in his abdominal outlines is no less striking. By swallowing air and then effecting pressure upon it by contractions of the rectus abdominalis muscle, he can rapidly pass from the appearance of extreme corpulency to the appearance of horrible emaciation, the skin of the abdomen appearing in the latter case to lie against the spinal column. His extraordinary power of swallowing and inhaling air enables him to shift the apex beat of the heart many inches and otherwise to displace his viscera. The power of swallowing air is not exceedingly rare, but the extent to which Young Hermann possesses it is unexampled in our experience. It is probable that Joseph Clark, the celebrated posture-master of the seventeenth century, possessed the secret of this trick in addition to his unwholesome knack of dislocating many of his joints at will. It may be remembered that Clark's favorite joke was to go to a tailor to be measured with his right shoulder, say, much higher than the left, to return to fit the suit on with the protuberance on the other side, and finally to call at the shop and reject the clothes indignantly, having this time assumed a central hump. Young Hermann might amuse himself in a similarly ill-natured way if the inclination took him."

In commenting upon the foregoing a correspondent to the "Lancet" says that two similar cases are recorded. The first is in Volume IV. of Buckland's "Curiosities of Natural History," page 99, and the second in a book called "Wondertul Characters," published by Hotten. Buckland's account is as follows and was given to him by a correspondent: "When I was at Dinan (Brittany) in 1833, a man came round the town under the permission of the mayor, headed by a drum. He was the most miserable object I ever saw, and called himself by the appropriate name of the 'Living Skeleton,' etc. A record of this is most likely at the Mairie to this day. We went to see him perform, and, amongst others, was an English as well as a French doctor. He first requested us to attach the two joints of the thumbs together above the bone; this we did with very fine whipcord, so excessively tightly bound round that one would have thought that the little blood (if any) that might be in him would have burst out at the end. But no; he quietly wetted the fastening, and as quietly withdrew one of the thumbs therefrom, leaving one centre of the figure eight versed. He did a variety of other experiments with padlocks, etc., and finished by requesting us to procure a moderately-sized chain (it was a long one, somewhat stronger than a jack-chain). With this chain the body and arms were encircled as tightly as two men could possibly haul it by placing their feet against his body. He made the remark to a gendarme present—'I suppose that if you had got me now in prison, you would think you were all right?'—and then, by a sudden movement of the body, the whole of the chain fell to the ground."

The "Wonderful Character" was one Daniel Cuerton, born in 1749. Of him it is related that "he could appear the largest or the smallest man across the chest in the company, if there were twenty persons present, and put on the coat of a boy fourteen years of age and it would apparently fit him. Such an astonishing way had he of compressing himself that he would measure round under the armpits with three handkerchiefs tied together and yet the same measure being applied again at the same place would measure round him and three other stout men, being four persons in the whole. How he did this none could tell, but it seemed he had an art of drawing his bowels up to his chest and greatly swelling himself at pleasure."

The Pipe Face.—It is declared that the constant habit of smoking pipes has a perceptible effect upon the face. "The pressure of the lips to hold the pipe in position increases the curvature of the lips round the stem and the muscles become more rigid here than in other parts. Thus the lips at a certain point become stronger, and the pipe is unconsciously held in the same habitual position. After long continuation of the habit, small circular wrinkles form parallel with the curvature of the lips around the stem. These are crossed by finer lines caused by the pressure of the lips to retain the stem in position. In the case of old men who have smoked

a pipe for years the effect upon the lips is very marked, not only altering the form of the lips but of one entire side of the face, causing the wrinkles that are the result of age to deepen, and, instead of following the natural course of facial wrinkles, to change their course so as to radiate from the part of the mouth where the pipe is habitually carried. Furthermore, one or both lips often protrude, just like the lips of people who used to suck their thumbs when children. The effects of pipe smoking upon the teeth and lower jaws are even more apparent than in the case of the lips. If any man who has smoked a pipe for a considerable length of time will take the trouble to examine his own teeth, he will find that at the point where he usually holds the stem between the teeth the latter have become worn.—*Medical Record.*

"Literaturitis" the disease of Modern France.—This is a complaint an account of which will be found in no medical text-book. M. Charles Bastide is responsible for the naming of this fin-de-siecle disease, and in the current number of the "Fortnightly Review" discourses on its origin, its contagiousness, and on its various symptoms. It may be said that, although it is more or less prevalent in all parts of the civilized world, it is in France that its course is most virulent. The inoculation of "literaturitis" begins at an early age; the boy at school is the first to receive its baneful seeds into his system, and as he advances in years the disease gains a firmer hold, until at last the malady is past cure. In a word, the epidemic referred to is that disseminated by the corrupt literature of the day. According to M. Bastide, "Public unrest in France, the unsteadiness, the tendency to excitement, the frantic loves and hates, may be in a large measure attributable to the unwholesome pabulum France digests. Paris is the hotbed in which grow many poisonous fungi, and unfortunately Paris prepares the food and distributes it." This perhaps is scarcely a subject to be commented on in the pages of a medical journal, as it concerns the physical body only indirectly. Still there can be no doubt that the reading of pernicious literature does harmfully affect the body through the influence of the mind, especially with the young. Such books, too, tend to suggest and foster habits which, if continued in, will eventually wreck both body and mind.—*Medical Record.*

A Novel Cure for Whooping-Cough.— There are many curious customs and superstition existing even in this enlightened age, and among the most peculiar are some practised by the peasants of Ireland for the cure of various complaints. In certain districts of that country whooping-cough is treated in quite a unique manner. A few months ago much amusement was caused by a case which came before the Coroner's Court in Belfast, in which whooping-cough was treated in a child by passing the sufferer three times under a donkey.

Mr. W. R. Le Fann, in his amusing book on Irish life, relates several other instances of a like nature, and draws attention to the fact that nearly all the most popular remedies are for the relief of whooping-cough or chicken-pox. Some donkeys are believed to be possessed of curative virtues in a much higher degree than are others. A man living in County Cork owned an animal which could boast of more than a local reputation. This man used to lead his donkey through the streets of the City of Cork, crying out: "Will any one come under my ass for the chin-cough?" (A name given to whooping-cough in the rural parts of Ireland.) In County Down the charms in vogue were more various. Two kinds of food obtained from two first cousins who are married, and soup made from the tails of mice is there regarded as a panacea for chicken-pox. In the agricultural districts of the East of England, wearing a potato around the neck is esteemed a charm against rheumatism.—*Pediatrics.*

A Peculiar Idiosyncrasy.—

Among the curiosities of medical literature are the stories, many of them well authenticated, of the peculiar suceptibility of some unfortunate individuals to certain odors and emanations. Among the substances which have been known to produce attacks of spasmodic asthma are roses, musk, tea, ipecacuanha, the odor of a cat, fried fish, the dust of oats, malt, rice, feathers, wool, and that caused in the demolition of old houses. Dr. Eugene Deschamps has added asparagus to this long list. He has published a full clinical report of a victualler over 40 years of age, who suffers from severe spasmodic attacks of coughing whenever he attempts to prepare raw asparagus for the cook. He is arthritic and nervous. Twenty years ago he became a cook, and remained so for a long time, but was temperate, and hence suffered little general ill-health, except from slight anemia. From the first, however, he found that while trimming asparagus in the kitchen violent sneezing, coryza, and running of the eyes set in. Within half an hour dyspnea followed, with cough and expectoration. All these symptoms used to vanish within an hour or two. Hence he managed to continue at work, and rose to be chef in large hotels. But whenever he assisted the under-cooks in dressing asparagus the fits returned worse than before. He now owns a restaurant. Last spring he helped his own cooks on a busy evening, and plucked a few stalks of asparagus. The fits of asthma came on at once with unusual violence, and he was ill for several days. There was free expectoration, and much coryza troubled the patient for some time. Dr. Deschamps gave iodides and bromides, with morphine in infusion of senega, cocaine and borax lozenges, and inhalations of steaming solutions of marsh-mallow and poppy. Neither fever nor albuminuria was observed. The increase of intolerance of asparagus is remarkable, as the patient is better off in every respect than he was twenty years since, —prosperous, contented, and strong. He can peel onions, carrots, turnips, and other roots with perfect comfort, but after plucking a considerable amount of salsify mild sneezing and coryza set in, but without

dyspnea. He has all along been able to eat asparagus freely, as the meal is never followed by any of the troublesome symptoms. Dr. Deschamps dwells on hay-asthma, and states that he has seen a marked case of ipecacuanha-asthma, a disorder, as has been said, noted by other observers.—*Exchange.*

A Curious trade is that of a German who breeds rats for vivisection purposes in Berlin.

Spoken in Jest.

"Doctor, where did you get that beautiful scarf pin?"

"From my first patient."

"Inheritance?"—*Fliegende Blaetter.*

COMMERCIAL NEWS.

In the *Atlanta Medical Journal* of February, 1898, Dr. Herman D. Marcus, Late Lecturer on Materia Medica at Medico Chirurgical College, Philadelphia, Pa., says :—In 55 cases of uterine and vaginal diseases, I have used Micajah's Medicated Uterine Wafers with distinctly favorable results, as follows: Thirty-eight were cured, nine greatly improved, and the balance unimproved, a percentage of cures larger than from any other form of treatment. Some twenty-five or thirty cases of leucorrhea treated with these wafers showed cures in three to six weeks. (A sample of Micajah's Medicated Uterine Wafers will be sent free by addressing Micajah & Co., Warren, Pa.)

Cycling and the Saddle.

Injury of the prostate gland and the prostatic urethra from riding a faulty saddle is one of the most deplorable results that can follow the fascinating practice of cycling; likewise an improper saddle, by permitting pressure and irritation of the external genitals, sometimes develops the habit of masturbation in girls. With these elements of danger eliminated, it is by far the most popular and beneficial form of outdoor exercise we are acquainted with.

The physician who thoroughly masters the saddle question both from a scientific and practical standpoint and advises his patients and patrons accordingly, may render them a very great service.

Food Manufacturers *vs.* Physicians.

Some of the prepared foods are advertised in newspapers and circulars on the cure-all and "save-the-doctor-bill" plan. We have noticed some of their advertisements wherein the wonderful properties of the foods are extolled as cures for a long list of diseases. The Imperial Granum Food, however, is advertised only in the medical press and is sold through the recommendation of the profession. It deserves the support of physicians on this account therefore, as well as for its merits as an ideal prepared food.—*The Wisconsin Medical Recorder*, February, 1898.

"* * * Some manufacturers, like the Antikamnia Chemical Co. and the Imperial Granum Co., are making conscientious efforts to keep the people from buying their products except upon the advice of physicians, are rigidly excluding their advertising from the general public—and so deserve the hearty support and encouragement of the medical profession. Of some others, who are reaching out for the "dear public" as well as the "dear doctor," as much cannot be said. * * *"—*American Journal of Surgery and Gynecology*, February, 1898.

The Moscow Convention.

Among the many objects of interest on exhibition to the medical men in the great hall of the riding school was one which attracted a great deal of attention, an American invention—

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ORIGINAL COMMUNICATIONS.

THE ELIMINATION OF IODIN AND SALOL BY THE URINE.

By I. H. Coriat.

Chemical Laboratory—Tufts College Medical School.

The effect on the urine of iodin, or any of its combinations, is a subject that has received but little attention in the annals of medical chemistry, although it has long been known that its elimination from the system was a very rapid process, and that in so short a time as fifteen minutes after its administration, its presence could be detected in the urine. The action of iodin salts on the urine was first brought to the notice of the writer by the peculiar reactions of a test made in the course of a clinical analysis, and led to a more thorough investigation of the subject, with the results set forth in this paper.

The urine was obtained on February 21, 1898, from Ward F, Bed 23, service of Dr. F. H. Williams (to whom our thanks are due for the records), Boston City Hospital. The amount was somewhat below the normal (1000 c.c.), while the color was high and suggestive of a febrile condition. At the time the urine was obtained the nature of the case was unknown. The specific gravity (1020) and the amount of urea (28.9 grams) were normal, but, as in all conditions associated with fever, the chlorides were decreased (5.7 grams), while the phosphates, both earthy and alkaline, the sulphates, and kreatinin were largely increased. While appplying the nitric acid test for albumen, it was noticed that a ruby-red ring appeared at the junction of the acid and the urine. Albumen was absent. It was at first thought that this color was due to an increased

amount of urohematin or indigo red, and to this end the reaction of Rosenbach was resorted to. A small amount of boiling urine was reduced, drop by drop, with concentrated nitric acid. The urine gradually changed from a reddish-brown color to a brilliant red, and at the same time it foamed up, the foam assuming a delicate pink color. Clearly, this did not respond to Rosenbach's reaction for indigo red, in which the urine becomes a dark Burgundy color with a blue foam. But, as the urine had the high color of fever urines, the diazo-reaction of Ehrlich was next tried, with positive and well-marked results. The chromogen was then isolated, by treating about 250 c.c. of the boiling urine with concentrated nitric acid, until the ruby-red color was again obtained. This was extracted by shaking with ether, and the ethereal extract, which became a red color, was again shaken with a weak solution of sodium carbonate. The sodium carbonate solution now became a red color, with a well-marked odor of iodoform.

It now became evident that the peculiar colors and reactions were due to some form of iodin, administered as a medicine. This was proven by taking a small portion of the solution and treating it with a few drops of sulphuric acid, in order to set free nascent iodin, and this, when added to a solution of starch, gave the characteristic blue color of iodide of starch.

On looking up the history of the case, it was found that the patient had been admitted to the hospital on January 24, 1898, suffering from a high fever, the thermometer registering 101° F. Between the date of entering and the date of obtaining the urine the temperature ranged from 101° to 103° F., never descending below the former figure. The pulse was 30, and the number of white corpuscles was normal. The typhoid serum test was tried at eight different times but gave negative results. On February 11, potassium iodide was given in 10-grain doses, three times a day. It was, therefore, evident that the peculiar coloring matter was due to this drug, and not to febrile chromogen. The fever, as seen from the several serum tests, was not typhoid, although the urine gave a perfect diazo-reaction, supposed to be characteristic of this disease. This reaction, therefore, is valueless, when potassium iodide is used as a drug.

The potassium iodide was evidently eliminated in the same form as it was administered, in spite of the well-marked odor of iodoform, as on evaporation of a small portion the characteristic six-sided yellow crystals of iodoform could not be obtained. From the above experiments it is clearly evident that the ingestion of potassium iodide, or in fact any form of iodin, if continued for any length of time (in the case cited about ten days) can give rise in the urine to a reaction closely simulating the diazo-reaction of Ehrlich, and impossible to differentiate from a genuine diazo. It would probably be a wise course, when testing the urine for this reaction, in order to diagnosticate typhoid, or any other acute febrile disease, to bear this fact in mind, and thereby avoid confusion and error..

After the ingestion of iodoform, as well after its application to the skin or mucous surfaces, for antiseptic purposes, the iodoform appears in the urine partly as an iodide, partly as an iodate, and can be detected as such. Iodin can also be detected in the urine after the use of thyroid preparations[1]. Baumann's method for the detection of iodin is to treat the urine with fuming nitric acid or chlorin water, and shaking with chloroform. If iodides are present, metallic iodin is set free, and the chloroform assumes a red color. Sandland treats the urine with sulphuric acid or potassium nitrate, and shakes with carbon disulphid the iodin passing over into the carbon disulphid and coloring it red[2]. Jolles determines iodin directly by treating the urine with concentrated hydrochloric acid, and covering it with a weak solution of calcium chloride. At the point of contact there is found a brown ring, which, on the addition of starch solution, becomes colored blue[3]. Iodin can be determined quantitatively in the urine by Harnach's method, that of estimating the iodin as palladium sub-iodide.

Although salol has received a greater share of attention than has iodin, the form in which it is eliminated has been made the subject of manifold misstatements. Even as good an authority as Bartholow, in the ninth edition of his materia medica, claims that salol is split up in the body into salicylic and carbolic acids, and is eliminated as such, the only proof being the production of a violet color, when ferric chloride is added to the urine after the administration of salol. Without further research, this was accepted as positive evidence of the existence of carbolic acid in the urine. As will be subsequently shown, this view, according to the researches of Dr. Austin, of Tufts College Medical School, is entirely erroneous, the salol being eliminated, not as carbolic and salicylic acids, but as salicylic, salicyluric acids and hydroquinon.

The urine on which Dr. Austin's experiments were performed was obtained on February 11, 1898, from the Salem Hospital. The patient was suffering from an attack of acute articular rheumatism, and the amount of urine passed daily showed the remarkable variations of 500—1500 c.c. between the dates of February 5 and February 22. Salicylate of sodium was given to the patient every four hours, in 5-grain doses, but as this drug was irritating it was discontinued and salol was substituted, the latter being given in 10-grain doses every three hours. A sample of the urine (500 c.c.) obtained on February 11 gave the following tests and reactions :

The urine darkened upon exposure to the air, or upon the addition of an alkali, and after boiling with HCl it reduced copper. It gave a fine violet color with ferric chloride. The coloring matter was extracted by strongly acidifying the urine with HCl, and warming for some time upon the water bath. It was then extracted with ether, and the ethereal extract was repeatedly shaken with a weak sodium carbonate solution, until the latter was no longer colored. The ether was then evaporated, and the residue was again extracted with a saturated solution of sodium sulphate.

ous. She recovered and the loss of power was rapidly regained. With the exception of some increase in size, there was little change in the aneurism since her previous stay in the hospital. The pain and cough were less. During the last six months of this sojourn she was kept in bed, given a light diet and iodid of potassium.

She left the hospital in very good physical condition, and immediately engaged in hard work at her former occupation.

In the summer of 1891 she spent two and a half months in the Pennsylvania Hospital, where she was admitted on account of an attack of influenza. After her discharge she worked steadily without any discomfort and without any intercurrent illness until 1894, when she was admitted to the Jefferson Hospital, where she remained for two and a half months.

In the winter of 1895-96 she was admitted to the University Hospital in an attack of peritonitis, probably due to a pyo-salpinx. She recovered completely from this serious illness, and shortly after went to New York city. There she developed an acute bronchitis, and was admitted for a stay of five weeks to the Presbyterian Hospital. After her recovery she returned to Philadelphia, and has been working almost constantly and enjoying very fair health ever since. She has just completed a brief sojourn in the University Hospital on account of a mild influenza.

The patient first came under my observation during her second stay in the Philadelphia Hospital nine years ago. She turned up at my office about four years later, since which time she has returned at frequent intervals. In the last five years, so far as I have been able to observe, her cardio-vascular condition has been very much the same as you see it tonight.

Physical Signs.—The left pupil is dilated. There is very marked pulsation in the carotids and subclavians. There are no venous pulsations. The superficial veins of the chest are quite evident, more especially on the left side. The suprasternal notch is very deep and shows a slight pulsation. The left radial pulse is retarded and less full than the right. There is a very decided prominence to the left of the sternum, extending beyond the mid-clavicular line to the left and from the clavicle to the third rib. This mass pulsates very decidedly with each cardiac systole. On palpation there is no thrill to be discovered. The pulsation is distinctly expansile, especially at the left border, where the sac walls seem soft and thin. There is a decided diastolic shock. There is no palpable pulsation in the suprasternal fossa, but there is more decided pulsation above the left clavicle than above the right. There is no tracheal tug. On percussion, the area of dullness is shown to extend from the upper portion of the sternum down the mid-sternum to the second rib, from this point inclining to the left until it reaches the third costal cartilage at its junction with the sternum, then following the lower border of the third rib along its course until it reaches the mid-clavicular line, from which point it ascends first slightly to the left, then to the right, reaching the clavicle just about a half inch within the mid-clavicular line. Auscultation over this area shows a faint systolic murmur and a decided accentuation of the second sound. Careful examination of the posterior surface of the chest is entirely negative.

An examination of the heart reveals the following conditions : The apex beat is in the sixth interspace in the mid-clavicular line. There is no thrill, and the impulse is neither diffuse nor forcible. The area of superficial cardiac dullness begins above in the parasternal line in the fourth interspace (thus leaving an area of resonance between the heart and aneurism) to the right at about the left edge of the sternum, the left border beginning just outside the mid-clavicular line. There is a very faint systolic murmur heard at the apex, which does not seem to be transmitted toward the axilla. In the aortic region there is a loud systole murmur, which is heard also over the sternum and to its right as low as the fifth rib, and with less distinctness just beneath the inner third of the right clavicle.

In order to verify the physical examination above recorded, I was enabled to study the aneurism with the fluoroscope through the kindness of Dr. Charles Lester Leonard. The shadows cast seemed to correspond almost exactly with the outline as obtained by percussion, except that the shadow from the aneurism overlapped the shadow from the heart. A skiagraph taken later suggested the involvement of the descending aorta only, the upper limit of the shadow corresponding to about the fourth rib. This result must necessarily be incorrect, as the upper limit of the bulging of the chest is just above the second rib. There was one feature of interest, and that was the shadow of the left border of the aneurism (the point at which the expansile pulsation was most marked, and the process of clot-formation evidently least advanced) was very faint indeed.

There is practically nothing added to our knowledge of the physical condition in this case by the photographic process.

The development of this aneurism was in all probability dependent upon the pre-existing syphilis ; the occupation of the woman, involving a considerable amount of heavy lifting, being doubtless of some etiological moment.

The aneurism is evidently saccular, and I am inclined to believe it springs largely from the descending portion of the arch of the aorta. In favor of its being in this position are the absence of pressure symptoms, its location (which is too far to the left and too low for an aneurism of either the ascending or transverse portions of the arch), and the absence of palpable pulsation in the suprasternal notch. Against its being in this position are the inequality of the pulses, the anterior position of the aneurism, almost all aneurisms of the descending portion of the arch manifesting themselves posteriorly, and the lesser frequency of aneurisms in this position as compared with aneurisms in the ascending and transverse portions of the arch.

For several reasons this case is of unusual interest. In the first place, from the length of time which it has endured, certainly for more than ten years ; in the second place, from the size and location of the aneurism ; in the third place, from the almost entire absence of symptoms from its beginning to the present time ; fourth, from the gradual disappearance of certain physical signs which at one time existed, namely, the thrill, bruit, tracheal tug, and the diminution in the expansile pulsation ; fifth,

on account of the small area at the left border of the aneurism, in which, judging from the character of the pulsation and thinness of the sac walls, there has been no clot-formation ; sixth, from the fact that there has been practically no change in the size or physical signs of the aneurism within the last four or five years ; and seventh, from the fact that since the development of this aneurism, the patient has passed through one extremely serious and several moderately serious acute illnesses.

To all intents and purposes, this may be considered a case of spontaneous cure, and yet it is not possible to believe that the sac is entirely obliterated, owing to the fact that we still have some expansile pulsation, which must be caused by blood entering the aneurismal sac.

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[1]THE DERMATOLOGIC ASPECT OF AUTO-INTOXICATION.

By Jay F. Schamberg, A. B., M. D.

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Despite the wonderful advances that have been made in the domain of dermatology within the past few decades, the etiology of many diseases of the skin rests to-day in obscurity. One of the causes of our defective knowledge in this direction is the important role played by that arch-enemy of science, idiosyncrasy. It throws almost insurmountable difficulties into the task of classifying cause and effect. The same cause often produces diverse effects, and diverse causes not infrequently produce the same effects. It is evident that idiosyncrasy must play a very important part in auto-intoxication. In speaking of auto-intoxication, we usually refer to that process as taking place in the gastro-intestinal canal. Auto-intoxication must be considered as a poisoning of the system by noxious substances generated within the organism. In its broader sense, we could therefore, speak of intoxications of gastro-intestinal, of hepatic, and of renal origin. Inasmuch, however, as the relation between Bright's disease, diabetes, etc., and various skin diseases, has been thoroughly established, I will confine myself to the narrower interpretation of the subject.

It may be stated that auto-intoxication influences the skin chiefly through the mediation of the neuro-vascular apparatus. It produces most commonly affections belonging to the so-called group of angio-neuroses, of which urticaria may be taken as to the prototype. Urticaria is a disease which may be produced by diverse agencies operating both externally and internally. It is well known that a large number of food-stuffs are capable of giving rise, in predisposed individuals, to the morbid phenomena of the affection. The shell-fish, particularly mussels and crabs, cheese, pork, sausages, mushrooms and strawberries, are especially prone to produce the disease. In such instances, however, we cannot,

1.—Read at recent meeting of the Northwestern Medical Society.

strictly speaking, attribute the disease to an auto-infection. In these cases the poison is introduced from without. Schmidtmann found a ptomaine which he called "mytilotoxine" in mussels taken from stagnant water, and there is reason to believe that it is the product of a bacillus, cultivations of which have proved fatal to animals (Krocker). From analagous reasoning, it is not at all improbable that some other of these presumably innocuous food-stuffs do, at times, contain ptomaines.

Urticaria, must, however, not infrequently result from putrefactive and fermentative changes which take place in the alimentary canal, for the simplest articles of food are capable at times of provoking the disease. Auto-intoxication is probably responsible for the majority of the acute and evanescent attacks of hives. In these cases the noxious substances in the intestinal tract are absorbed by the blood and carried into the general circulation. When they reach certain cells in the higher nerve centres, they exert an irritant influence upon them. Efferent impulses are then sent from the vaso-motor centres to the peripheral vascular apparatus. There is a momentary contraction of a number of capillaries or veins in the papillary layer of the skin, followed by a paralytic dilatation of these vessels. The resulting stasis permits a serous and, at times, corpuscular, exudation into the surrounding tissues, with the production of lesions we clinically recognize as wheals. The whitish color of the wheal is due to the exclusion of blood, as a result of the pressure of the serum. In these cases, the cause being known, the treatment is self-evident. Free purgation, preferably by the administration of a saline, is rapidly efficient. Both salol and phenacetin are of great value in these cases, probably on account of their virtues as intestinal antiseptics.

Erythema exuudativum multiforne is a disease more or less clocely allied to urticaria. While its etiology is veiled in considerable obscurity, it is at times, in all probability, the result of auto-infection. It is an acute, inflammatory disease of the skin, characterized by the occurrence of symmetrically situated lesions of various shapes and sizes, and occurring chiefly upon the extensor surfaces of the body. We may have merely macules and papules, or, in the rarer forms, vescicles, blebs, or even hemorrhages. The disease is often accompanied by constitutional symptoms, such as headache, malaise, pains in the joints, and elevation of temperature. The treatment is practically the same as that given for urticaria.

Many of the simple erythemata (so-called stomach rashes) seen so often in children, and associated with errors of the gastro-intestinal tract, are the result of auto-intoxication. In these cases the eruption is probably due to a temporary atony of the peripheral vessels, induced by impulses of centric origin.

There are a number of other dermatoses in which auto-intoxication has been accused of being the fons et origio mali, but a discussion of these would take us into the field of the problematic. I believe, however, that as bacteriology and organic chemistry advance, the various auto-intoxications, in the broadest sense of the term, will be found to be the causative agents in many of our at present obscure affections of the skin.

REVIEW OF MEDICINE.

MEDICINE.

A Case of Acute Leukemia. (*Medical Record*, March 5th, 1898.) By W. H. Thompson, M. D., LL D,, and James Ewing, M. D.

The case reported is as follows : A married woman of 21 years, with good family and previous history, save that since the birth of a child seven months ago she had not felt strong. She was extremely anemic when first observed. Her temperature was 105.6° F., her pulse 148—very small, and her respirations 40. Emaciation was marked. The urine had a specific gravity of 1014, contained no albumin, sugar, nor casts, but many oxalates of lime. She gave a history of frontal headaches for six months past. Six weeks ago she had a sore throat for two weeks. Following this the entire right arm became swollen, painful and red. This lasted for three weeks, then gradually improved. After this she developed pain in the back and legs. Three days ago she fainted, and in falling struck her left side, causing a severe pain throughout the abdomen, but especially on the left side. There were diffused tenderness and pain on pressure in the eleventh and twelfth dorsal vertebrae. The pain was constant and increased by respiration. The bowels were costive.

On the night of the patient's admission she developed a choking sensation and dyspnea. Physical examination showed the lungs to be normal. There was a loud systolic hemic murmur in the pulmonary area; the spleen was just palpable ; there were no enlarged lymphatic glands, nor any cutaneous ecchymoses.

The examination of the blood on the second day of her admission showed 1,400,000 red cells and 27 per cent. of hemoglobin. She developed nausea, which remained constant, and she had frequent attacks of vomiting. She developed much pain and local heat and tenderness in the left arm. Her temperature fluctuated irregularly between the normal point and 105° from the time of her admission. The night before her death, which occurred on the 19th, eleven days after her admission, she developed a patch of ecchymosis upon her nose.

The examination of the blood made on the second day after her admission showed 1,290,000 red cells and 20 per cent of hemoglobin, the leukocytes not counted. Five days later the red cells showed no change, but normoblasts were abundant. It is stated that the leukocytes numbered probably one hundred thousand, the proportions being, mononuclear leukocytes, 33 per cent.; myelocytes, 12 per cent.; poly-nuclears, 55 per cent. Occasional eosinophile cells were seen. Examination made immediately after death showed an abundance of normoblasts, a good

many megaloblasts, an abundance of leukocytes showing 17 per cent. of mono-nuclears, 32 per cent of myelocytes, 48 per cent. of poly-nuclears, and 3 per cent. of eosinophiles.

The autopsy showed the heart muscle to be very fatty. The spleen was moderately enlarged, very firm, elastic, deep red in color on section, and the malpighian bodies were dark, shiny and indistinctly limited. The liver was softened, a little enlarged ; the centres of the lobules were homogeneous and pale, the peripheries a deep red. There were areas resembling the focal necroses of infectious diseases. The kidneys were pale and fatty. The stomach showed a few ecchymotic areas. The gastro-intestinal tract was otherwise normal. The mesenteric, intra-peritoneal and periportal lymph nodes were slightly enlarged and congested. The liver showed collections of large mono-nuclear cells apparently connected with the central veins. They showed all stages of peculiar necrosis, characterized by extreme karyorhexis, with no loss of chromatin, nor any trace of inflammatory reaction in the neighboring cords of the liver cells. The cells were markedly fatty ; there was no infiltration in the portal canals.

There were some foci of large round cells in the region of the arched vessels of the kidneys, and acute degeneration of the tubule cells. The only change in the walls of the gastro-intestinal tract was the increase of leukocytes within their blood vessels.

The marrow in the shaft of the femur was diffluent, light-colored, bloodless, closely resembling pus or fat. The marrow was light-colored and anemic in the ribs, sternum, ilia, vertebræ, clavicle, hyoid and humerus.

The microscopic examination of the lymph nodes showed the sinuses and nodules partly or entirely obliterated by infiltration with large mononuclear cells. The capsules of the nodes were intact. Sections of the marrow of the femur showed entire absence of fat cells and diffuse growth of large neutrophile myelocytes. There were a few giant cells, eosinophile cells and lymphocytes. The small lymphocytes normally found in the malpighian bodies of the spleen were largely replaced by large mononuclear cells. These also occupied the splenic sinuses, and there was a considerable number in the splenic cords. The vessels and sinuses were moderately filled with red cells ; there was a moderate pigment deposit. The heart muscle was very fatty on microscopic section. The spinal cord showed no changes.

S. McC. Hamill.

On Palpation and Auscultatory Percussion. (*British Medical Journal*, Feb. 19, 1898) By Robert McGuire, M. D., F. R. C. P.

The object of the paper is to call attention to the value of palpation as a method of physical examination of the chest and abdomen. The author professes to outline the heart, liver and spleen as accurately by determining the sense of resistance on palpation as by percussion. He describes the application of the method as follows : "To practice the

method it is well at first to press lightly and alternately with the first and second fingers of the right hand upon the part desired, using just a little more pressure than one would employ in testing the eyeball for glaucoma. It is important to throw one's knowledge of anatomy aside." By palpating in the first and fourth interspaces on the left side in the parasternal line an inch and a half outside of the edge of the sternum, it will be found that the fourth interspace is the more resistant, owing to the presence of the heart. The same difference will be found in palpating above and over the area of liver dullness. He is able to recognize differences of resistance through bone as well as the soft tissues. A case of aneurism of the aorta is given in way of illustration. The ordinary methods of physical diagnosis failed to show its existence. During a subsequent visit of the same patient, while demonstrating this method to a class, the existence of an aneurism was accidentally revealed by increased resistance over the upper portion of the sternum. The author considers this method more accurate than percussion for the purpose of outlining the heart, liver and spleen. A distended, overlapping stomach and large intestine do not interfere with the sense of resistance on palpating the spleen, but do act to destroy the value of percussion, consequently the method is especially valuable in the early diagnosis of typhoid fever. He finds no difficulty in outlining the left kidney by palpation over the back. The determination of the upper border of the right kidney is interfered with by the liver. He makes no reference to its application in the determination of areas of pulmonary consolidation other than to say that in the examination of chests he has often discovered small areas of resistance yielding no other physical signs, occurring in patients who have given histories of pleurisy or pneumonia in these regions. He attributes this resistance to probable small areas of pleural or pulmonary thickening too small to be detected by other methods.

In speaking of auscultatory percussion, the author calls attention to the fact that it is of value only in determining the outline of organs which come in direct contact with the chest or abdominal wall. Thus, in determining the outline of the heart, it is applicable only to the area of superficial dullness, since the pulmonary structure overlying the remainder of the heart prevents transmission of the sound through the solid structure of the heart. The same difficulty applies to the outlining of the stomach and overlying transverse colon, interfering with the accuracy of the observation in the same manner as the lungs. He considers this method especially valuable in outlining the lungs and determining areas of pulmonary consolidation, in ascertaining the amount of pleural effusions, and the varying degrees of dilatation of the colon.

McC. Hamill.

Some of the Ways in which Milk Becomes Pathogenic. (*British Medical Journal*, Jan. 22, 1898.) By Sheridan Delepine, M. B., C. M. Edin.

The author, in making an examination of over 110 samples of milk for the purpose of determining the prevalence of tuberculous infection,

discovered incidentally that milk frequently produces considerable irritation through changes which occur after it has left the udder and been preserved under certain conditions mentioned below.

Some of the samples examined were obtained from diseased cows. This milk was drawn into sterilized vessels and taken directly to the laboratory. These samples he designates as unmixed milks. The other samples were taken from the milk cans at the railway stations and placed in sterilized bottles. These he designates as the mixed milks. The specimens were collected in both the summer and winter months. Some were preserved longer than others, dependent upon the distance they came. He found that as a result of the comparison of the milk of markedly diseased cows with that of the ordinary mixed milk, that the former is much less often capable of producing irritation than is the ordinary mixed milk supplied for consumption. In order to obtain a correct idea of the relative noxiousness of the mixed and unmixed milks, the tuberculous milks were excluded from 110 samples above referred to. This left 42 samples of non-tuberculous miked milks, and 18 of non-tuberculous unmixed milks. A comparison of their pathogenic properties showed that 40.8 per cent. of the mixed milks proved to be non-irritating, 40.8 were locally irritating, and 19.2 per cent. were highly virulent. Of the unmixed milks 60.5 per cent. were irritating, 38.5 per cent. locally irritating, and none of them highly virulent. A study of these same samples in order to determine the influence of time and temperature showed that the longer the time and the higher the temperature at which the milk was kept greatly increased the pathogenic properties of the specimens. The author concludes that infection of the milk outside of the udder and the conditions under which it is kept are the most important factors causing it to have irritating properties. He has found a close resemblance between the infection induced in guinea pigs from inoculations of milk which had given rise to outbreaks of epidemic diarrhea, and that produced in guinea pigs by the injection of some samples of milk secured in the market. From this he infers that milk must be one of the most potent factors in the summer diarrhea of children. This view is confirmed by the fact that he has been able to isolate a bacillus from all the cases of fatal septicemia due to milk injections the same as that obtained twice from milk giving rise to intense diarrhea in children and adults. This is the only microbe which he found constantly present, and it retains its virulent properties through several cultivations outside the body. It closely resembles the bacillus coli communis in its pathogenic action. Its differences are quite within the limits of the ordinary variations of the b.c.c., so much so, that he has, as yet, been unable to positively affirm that it is not this microbe.

S. McC. Hamill.

A New Test For Lactic Acid in the Gastric Contents, and a Method of Estimating Approximately the Quantity Present. (*Univ. Med. Magazine*, April 1898.) By J. P. Arnold, M. D.

Uffelman's test for lactic acid is neither a very delicate nor a very

reliable one. Boas' test, which was first announced four or five years ago, fulfills all the requirements perfectly, except that it is so exceedingly complicated and tedious as to be impracticable for every-day clinical work. For scientific investigations it is entirely satisfactory. Dr. Arnold's new test gives promise of filling a long-felt want. He uses two solutions, as follows :

No. I.—Saturated solution gentian violet (alcoholic,) o. 1 c. c.;
Distilled water, ... 250 c. c.
Sig.—This solution should be freshly made at least once a month.
No. 2.—Solution ferric chloride, (U. S. P., 1890) . . . . 5 c.c.
Distilled water, ... 20 c. c.

Into a test-tube put one cubic centimeter of solution No. 1, and add one drop of solution No. 2 from a pipette. The violet color of solution No. 1 changes to a bluish violet upon the addition of the ferric chloride. To this mixture add, drop by drop, the filtered gastric contents. If lactic acid or lactates be present, the color of the solution changes to a green or yellowish green.

Alcohol, glucose, butyric acid, acetic acid and phosphates, in quantities below 2 per cent., do not interfere with the reaction, as they do in Uffelman's test, and the reaction is not disturbed by the presence of acetone, albumoses, albuminoids, or peptones. Sulphuric, nitric, and hydrochloric acids do not give the reaction.

One drop of a .02 per cent. solution of lactic acid is said to give a very distinct reaction. When a large quantity of phosphates is present, there is at first a reddish violet color produced, which, in the course of a second or two, gives way to the characteristic green color. If phosphates be present to the extent of .5 per cent. it may take two or three drops of a .02 per cent. solution of lactic acid to bring out the reaction distinctly.

For the quantitative test proceed as follows : Prepare a .2 per cent. solution of lactic acid to use as a standard. This can readily be done by adding two-tenths cubic centimetre of lactic acid to seventy-five cubic centimetres of distilled water. Then take two small test-tubes of equal size ; to each add five cubic centimetres of test solution No. 1 and five drops of solution No. 2 from a pipette. To one tube now add one-half cubic centimetre of a .2 per cent. lactic solution. The mixture turns green. To the other test-tube add, drop by drop, the filtered gastric contents from a graduated pipette until the color in the second tube is exactly the same shade as that in the first tube. To get the percentage of lactic acid present, divide one-tenth by the number of cubic centimetres of gastric contents used.

BOARDMAN REED.

On the Occurence of Necrosis of the Glandular Epithelium of the Intestines in Diabetes Mellitus. (*Centralbl. f. Inn. Med.* 1897, No. 43.) By Ebstein.

Necrosis of the epithelium of the kidneys and liver has been described

by Ebstein and others as occurring in diabetes. The author's case seems, however, to be the first published of necrosis of intestinal epithelium in this disease.

The patient had presented clear symptoms of diabetes during life, and the main interest was in the discovery, at autopsy, of necrosis of the epithelium of the pharynx and intestines. In the upper part of the ileum were islands of epithelium of whitish color, which were easily scraped off. There were also patches where the epithelium was missing, and lower down were ulcer-like spots with overhanging edges and hemorrhagic base. Like conditions were found in places in the large intestine.

Microscopic examination showed that many epithelial cells of the tubular glands were without nuclei. In some places the surface-epithelium was necrotic or lost, and the glands filled with detritus or cast-off epithelium. In many parts the glands of Lieberküln had lost tissue.

These changes did not correspond to phlegmonous inflammation, and did not seem to be caused by circulatory changes as the blood vessels showed changes only where the process was far advanced. The cause does not seem micro-organismal, as bacteria were scarce where there was coagulation-necrosis alone, though in large numbers in the detritus. The author, therefore, decides that the necrosis is a toxic effect of the diabetes, to which cause Ebstein had referred the necrosis of the kidney-epithelium.

EDSALL.

THERAPEUTICS.

The Use and Abuse of Antiseptic and Germicide Remedies. (*The Practitioner*, January, 1898.) By G. Vivian Poore, M. D., F. R. C. P.

After comparing "the present rage for coal-tar products" to the high esteem in which tar-water was held by Bishop Berkeley and others of over a hundred years ago, the writer gives a long list of antipyretics and their epithelium, the interstitial tissue was necrotic and the blood-vessels much dilated. There was much cellular infiltration of the submucous antiseptics derived from the refuse of gas-works, and admits that many of them are of undoubted value. Attention is called to the antiseptic character of many condiments and articles of diet, which may check fermentations of various kinds in the alimentary tract. Vegetables containing allyl are of this class, the most useful of which are onions, mustard, and horseradish. The aromatic herbs employed in cookery are also antiseptic, and are most used with those aliments (*e. g.*, duck, pork) which are liable to undergo fermentation during digestion. Experiment has shown that the growth of *Aspergillus niger* is arrested by one-sixteen-hundred-thousandth of silver nitrate, of one-fifty thousandth of mercuric nitrate, or of one-two-hundred-and-fortieth of copper sulphate. Koch found that one part in sixteen hundred thousand of perchloride of mer-

cury hindered the growth of *Bacillus anthracis*, that one in three hundred thousand arrested the growth, and that one in twenty thousand destroyed the spore. Next in potency is oil of mustard, of which one part in three hundred and thirty thousand hinders, and one in thirty-three thousand arrests the growth of this bacillus; while allyl alcohol oil of turpentine, thymol, and peppermint arrest the growth in the ratios of one to one hundred and sixty-seven thousand, to eighty thousand, to seventy-five thousand, and to thirty-three thousand, respectively. Richet's experiments showed that the quantity of an antiseptic needed to arrest the growth of bacteria in sea-water was twenty times as great as that which sufficed to kill fish. The benefit derived from the use of silver nitrate, arsenical pastes, etc., in foul ulcers, is probably due to their antiseptic power. In cases of paraplegia with foul bladder the washing out of this viscus with solution of quinine or boric acid has doubtless added years to the life of many a chronic invalid. In foul conditions of the stomach the mild domestic antiseptics, dill-water, ginger, peppermint, are generally efficient. When fermentative changes become chronic, owing to the presence of the yeast-fungus, washing out with Condy's fluid or silver nitrate solution (very deadly to many of the fermentation fungi) is of undoubted value. The benefit following the administration of mercurial purgatives in foul stomach, etc., of quinin or arsenic in malaria, and of mercury and iodin in syphilis is explained by their antiseptic action. Good results have followed the free use of raw garlic by persons suffering from foul expectoration, and by children with cadaveric odor of the skin after measles and other acute specifics. In the treatment of tuberculosis antiseptics have been largely used—antiseptic inhalations, creasote, and guiacol carbonate; all without tangible result. In some cases of enteric fever antiseptics may sweeten the evacuations, but the writer has never seen the disease materially modified by their administration.

WARE.

SURGERY.

The Lettsomian Lectures on the Affections of the Urinary Apparatus in Children. Delivered before the Medical Society of London. (*British Medical Journal*. Feb., 12th, Feb. 26th, March 12th, 1898.) By John H. Morgan, F. R. C. S. etc.

The author starts with a discussion of congenital malformations and abnormalities of the kidney. These include horse-shoe kidney, congenital absence or abnormal position of one kidney, usually the left, a condition readily diagnosed in childhood by palpation and often associated with malformation of the genitals, congenital hydronephrosis and cystic kidneys. The ureters are frequently malformed, sometimes in association with congenital hydronephrosis. Hydronephrosis may be dependent

on phimosis and increased frequency of micturition and on congenital obstruction of the ureters. It is often bilateral, an important point in connection with nephrotomy. In such case death usually occurs in early life. A swelling in the region of the kidney, the sudden disappearance of which is associated with increased flow of urine, strongly suggests hydronephrosis.

Treatment comprises rubbing, tapping, which has to be frequently repeated, and nephrotomy with the formation of a urinary fistula. If suppuration ensues nephrectomy may be required.

Crushing injuries of the kidney may result in perirenal effusions of blood, which may become encysted, or suppurate and point in the ileocostal region. A swelling may develop later containing clear fluid resembling urine in some of its constituents, which may become purulent or rupture into the peritoneal cavity. Symptoms of these injuries are shock, and, later, vomiting hematuria, perhaps, with ureteral colic. If the kidney, pelvis, or ureter have been torn a tumor appears later. Treatment should be aimed at checking hemorrhage and relieving pain. If suppuration follows, or a secondary swelling of increasing size appears, a lumbar incision should be made, the kidney removed, if ruptured, and the region drained. Perinephritis and perirenal abscess, except when of traumatic origin, are rare in childhood, and are usually pyemic. The symptoms frequently resemble those of hip and spinal disease.

Hematuria may be symptonic of local or general disease. As causes producing it may be named irritating drugs, urinary crystals in the kidney in infancy, scurvy, purpura, hemophilia. Raynaud's disease, Bright's disease, and some of the exanthemata, paroxysmal hemoglobinuria may occur in syphilitic children. Renal hemorrhage, as a local condition, is usually more profuse than that from the bladder and is painless unless the ureter is obstructed. It is usually accompanied by casts and epithelium. Tuberculosis of the kidney is rare. The early seats of hematogenous infection are the apices of the papilla, the calices, or the pelvis. The parts below become infected through the ureter if it be pervious. The symptoms are frequent micturition, tenderness and increase in size of the organ, fever, sweats, and emaciation. In the early stage the urine is increased in amount, acid, of low specific gravity, and, later, always contains pus if the ureter is patulous. Tubercle bacilli may be absent. Blood occurs in scanty amounts and intermittently. Operative treatment must be instituted early to be successful. A ventral incision, permitting examination of the other kidney, may be employed. Large abscesses demand drainage, and, later, nephrectomy.

Tumors of the kidney in childhood are nearly always malignant, and, in the majority of cases, sarcomatous. The great majority of abdominal tumors of a malignant character in children arise from the kidney. Rarely they spring from the suprarenal bodies. They grow rapidly are rounded in outline, dull on percussion, except where they are crossed by the colon, and often soft. Hematuria is intermittent, but, when present, is abundant. Later there is cachexia, and, as pressure symp-

toms, vomiting, indigestion, and dyspnea. Exploratory incision is warranted, and removal may be attempted if it seems possible, but statistics are unfavorable. The abdominal route is preferable.

Calculus.—The symptoms may be simulated by the uric acid diathesis. As causes we have warm climate, limestone water, and improper action of the skin, with its attendant causes. Nephrolithotomy is rarely called for in children. In sounding children, roughness of the mucous membrane of the bladder may often be detected, due to spasm of the muscular fasciculus from hyperacidity of the urine. The statistics of Keegan and Greig-Smith favor litholapaxy as the operation of choice for vesical calculus. In both sexes litholapaxy should be chosen for stones of moderate size.

Those composed of oxalate of lime, and larger stones, require, in boys, the lateral lithotomy. The suprapubic operation is preferable for large stones and those of inconvenient shape and for those imbedded in sacculi or impacted in a ureter. Tables prove the added mortality of suprapubic operation.

Patent urachus is one of the causes of umbilical granulations and ligature of the granulating mass usually produces a cure. Cauterization and plastic operation are exceptionally required.

Hiatus of the bladder varies from complete exstrophy to a slight epispadias. The associated dilatation of the ureters may be due to their constant irritation and emptying, as in emuresis. There is a great tendency to kidney complications from direct infection through the ureter. Operations may aim to cover in the raw exposed surface, or the ureters may be transplanted into the rectum. The operation of Milton and Anderson is a promising one. Flaps of mucous membrane are dissected from the bladder, and urethral surface from without inward and united to form the interior wall, being covered in turn by marginal skin flaps. For epispadias Cantrell's method of enclosing the urethra and below the cavernous bodies has yielded good results. Epispadias may occur in the female, and consists in absence, partial or complete, of the anterior urethral wall, with, perhaps, division of clitoris and of the anterior vulvar commissure.

Cystitis may be associated with calculus or vesical tumor, or follow retention from any cause, but acute spontaneous cystitis is rarely seen.

"Acid purulent cystitis," due to the bacillus coli communis, is more common in girls than in boys, and may be mild or grave in its manifestations. Locally, in the severe form, there is strangury, hypogastric and lumbar pain, and the development of pyelitis, with emaciation, apathy, somnolence, collapse, uremia, and death. The urine is acid, pinkish or opalescent, offensive in odor, and contains pus, leucocytes, epithelium, and the colon bacillus. Tuberculous ulceration of the bladder is rare in childhood. It may be primary or secondary, a point difficult of determination. There is frequent and painful micturition, worse at night. Hemorrhage is usually slight. The urine becomes alkaline in the later stages. Cauterization may be practiced, zinc chlorid being preferred to the actual cautery.

Tumors of the bladder are rare in children. Their pathological structure varies, but, clinically, they usually tend to a fatal termination by the production of urinary obstruction. Removal has sometimes been successfully practiced, but, in the majority of cases, the formation of a suprapubic or perineal fistula is all that is feasible. Retention and extravasation may result from traumatic urethral stucture, perineal abscess, or calculus impacted in the urethra. Impacted calculus may be removed by forceps, by incision, or be pushed backward into the bladder and crushed.

Among evil consequences of phimosis are enuresis and incontinence, symptoms of calculus, hypertrophy of the bladder, and hydronephrosis. Hence, circumcision should be performed early when retraction is difficult or where the prepuce is very long. As urethral troubles in girls, may be mentioned prolapse of the urethra, caruncle, and prolapse of the bladdder and even of the ureter.

JOPSON.

Pes Planus and Pes Cavus. Anatomical and Clinical Study. (*Edinburgh Medical Journal*, February 1898.) Richard Barwell, F. R. C. S.

As etiologic factors in the causation of pes planus are mentioned those causes which tend to throw strain upon the muscles responsible for the maintenance of the plantar arch, viz. : the tibialis anticus and posticus, the peroneus longus, and the flexor longus hallucis, as well as the smaller " tie beam " muscles of the sole. These factors are especially potent in the bodily states in which the muscles are weakened, as during stages of rapid growth and after prolonged illness. Stress is laid on the function of the flexor longus hallucis as a supporter of the plantar arch, a function previously overlooked. Running beneath the sustentaculum tali it supports it, and, through it, the astragalus. The author deprecates the use of " valgus pads," the name he applies to the plantar spring. He asserts that although they forcibly restore the arch while in position, they also cause a pressure-atrophy of the " tie beam " muscles of the sole and produce pain by pressure on the internal plantar nerve. He recommends, instead, leather pads fastened to the inner margin of the sole and heel of the shoe. (This teaching is contrary to that of most American orthopedists, with whom the plantar spring is very popular. It certainly relieves pain in flat foot much oftener than it causes it, and it is a question how far the author's device, by which pressure is made on the ends of the already flattened arch, will go towards restoring it, although it may correct the valgus.) Exercise, and, for exaggerated cases, the hot-air oven, and over-correction with the subsequent use of plaster are recommended. As causes of cavus are mentioned undue length and paralysis of the calf muscles, resulting in dropping of the heel, and spasticity of the peroneus longus. There is later contraction of the plantar structures. Division of the plantar fascia, the plantar ligaments and the long flexor and adductor hallucis are necessary. Hot-air baths may be useful in the subsequent treatment. JOPSON.

OBSTETRICS AND GYNECOLOGY.

Senile Uterine Catarrh. (*Edinburgh Medical Journal*, April, 1898,) By J. Halliday Croom, M. D.

There are three forms of this disease: (1) Those associated with fetid discharge and no hemorrhage. (2) Those associated with leucorrhea and slight hemorrhage, and (3) those in which hemorrhage is the main, if not the only, symptom. Post-climacteric hemorrhages are in the main due to (1) beginning cancer, or (2) the recrudescence of a fibroid, or (3) occasionally from a form of uterine catarrh with gouty endometritis as its cause. The symptoms are markedly like those of malignant disease. There are present vaginal irritation, general cachexia and emaciation, occasional rigors and night-sweats, frequently pain in abdomen and back, and the discharge, which is watery and semipurulent, and frequently contains a considerable amount of blood. True "flooding" is much rarer than in cancer. The odor of the discharge is usually offensive but not necessarily so. Examination shows the uterus slightly enlarged, or, at least, not normally atrophied, but not so large or fixed as in malignant disease. The introduction of the sound is very painful. The mucous membrane is hypertrophied, succulent and easily detached. Microscopic examination of a scraping shows inflammatory changes, infiltration of leucocytes, reduplication of cells, and granular degenerations. Under appropriate remedies, senile uterine catarrh will rapidly improve, in a week or two, whereas this is of no avail in malignant disease. The diagnosis between this disease and primary fundal cancer is made by the slight, irregular and colicky pains; the early prominence of fetid discharge; the slight enlargement and mobility of the uterus and the absence of any neoplasm upon dilatation and examination of the uterus. The causes are uncertain but may be due to inflammation before the menopause, or a shrinking of the cervix with inflammation and retention, in the body of the uterus, causing colicky uterine pains. The great difficulty in the management of these cases is the differential diagnosis from malignant disease, but with due care this should be made. This condition is not prodromatic of cancer and never develops into cancer. The treatment recommended is rest, hot douches; internally arsenic, strophanthus, and chian turpentine. Locally, applications of escharotics or currettage with packing and drainage. The diagnosis is most important.

GIRVIN.

Extrauterine Gestation. (*British Medical Journal*, January 29, 1898.) By A. W. Mayo Robson, F. R. C. S.

The author gives a very useful scheme of the varieties of ectopic gestation with their various terminations, and reviews very fully and clearly twenty-three cases. He call particular attention to the symptoms and the following special points in the diagnosis: (1) Superficial dullness on percussion over the pelvis and in either flank which on deeper percussion gives a resonant note; (2) a thrill in the same region on gently flicking with the finger nail, though no ordinary sign of fluctuation can be felt;

(3) (a symptom he describes for the first time), on turning the woman over, the dullness in the flank, then uppermost, persists for some little time but gradually disappears. This has never been found on the case of any other fluid than blood in the peritoneal cavity; (4) Entire disappearance of the liver dullness (only seen in one case). He merely mentions the treatment to call special attention to the fact that operation in these cases should not be abandoned because of the collapsed condition of the patient, and he also advises an exploratory incision when in some doubt about the diagnosis. He considers it better to operate on a patient when seen after partial recovery from the first hemorrhage for fear of a second one.

GIRVIN.

Further Testimony in Regard to the Transverse Incision of the Fundus, (*Monatsblatt für Geburtshülfe und Gynaekologie*, February, 1898.) By Dr. Hans Schröder, Assistant in the Frauenklinik in Bonn.

As a supplement to the publication by Prof. Fritsch of his new incision for Cæsarian section (abstracted in the INTERNATIONAL MEDICAL MAGAZINE for February, 1898), Schröder now publishes four other cases in which this method was used. In three, a Porro was done, in the fourth Sänger's conservative operation was performed. One of the first group terminated fatally from sepsis, due to manipulations before admission to the clinic. The other patients recovered and were discharged from the hospital with their children perfectly well. The incision in question was a transverse one across the fundus uteri, instead of the old longitudinal one. The results in these four cases confirm the conclusions drawn by Fritsch in his first paper, namely: almost spontaneous delivery of the child as soon as the incision is completed, the impossibility of soiling the peritoneal cavity by blood and liquor amnii, the rapid contraction of the uterus, the ease with which hemorrhage may be prevented by digital compression of the cervix, and the ready egress afforded the blood from the cavity of the uterus. The pelvis of the patient should be elevated in the Treudelenburg position. The abdominal incision need not be carried so far down towards the pelvis, thus lessening the danger of subsequent hernia.

These advantages have been confirmed by G. Braun, Hain and Knauer of Vienna, and by Johannowsky, in cases operated upon by them since Fritsch made his first report.

L. S. SMITH

Abdomino-Vaginal Oophoro-Salpingo-Hysterectomy for Chronic Septic Inflammatory Conditions of the Uterus and Adnexa. (*Monatsschrift für Geburtshülfe und Gynäkologie*, January, 1898.) By Prof. Ettore Truzzi in Parma.

The author claims priority for his abdomino-vaginal method of oophoro-salpingo-hysterectomy in chronic bilateral inflammatory condi-

tions of the adnexa. He was the first to advise it as a systematic procedure. The first step consists in opening the abdominal cavity in the Trandelenburg position and, after freeing all adhesions, in shelling out the adnexa from their surroundings, cutting the infundibulo-pelvic and round ligaments between ligatures. The abdominal wound is then closed and the second step of the operation is begun. This consists ot the removal of the uterus and adnexa per vaginam, either with ligatures or clamps. The preliminary freeing of adhesions and ligation of the ligaments renders the uterus more movable, and facilitates the subsequent vaginal hysterectomy.

The advantages claimed are : lessening of shock through the vaginal operation, better drainage, and less danger of general peritoneal infection. In all cases in which a hysterectomy is contemplated, the abdomen should be opened first, then, if the case proves to be a complicated one, requiring considerable time, the operation should be completed per vaginam after the preliminary freeing of adhesions and division of the ligaments from above. Seven cases are reported in which this method was used successfully.

L. S. Smith

PEDIATRICS.

Sarcoma of the Kidneys in Children; A Critical Review of the Pathology, Symptomatology, Prognosis, and Operative Treatment as Seen in 145 Cases. (*Annals of Surgery*, Nov., 1897.) By Geo. Walker, M. D.

The author, after reporting three cases of this condition, which occurred in Johns Hopkins Hospital, in a most interesting communication, makes an extensive review of the literature as indicated in the title. He summarizes his work as follows:

Malignant tumors of the kidney in childhood occur most frequently either congenitally or within the first few years of life.

All of them are probably embryonic in origin as evidenced by the fact that they contain distinctly embryonic tissue.

While not being pure sarcoma they resemble it in their most prominent features.

They are very rapid in their growth and are not attended with any distinctive systemic symptoms in the first half of their course; in the latter they are accompanied by rapid and great constitutional disturbances.

They occur most frequently between one and two years of age.

The left kidney is more often affected that the right.

The disease seems to occur with about equal frequency in males and females.

The average duration of life without operation is 8.08 months; with operation it is 16.77 months.

Operative treatment to be successful should be instituted as early as possible; but even in the late cases, an exploration should be made.

Operation is followed by an immediate mortality of 38.52 per cent.; an ultimate one somewhere between 74.32 per cent. and 94.53 per cent.; 5.47 per cent. of cures, and a lengthening of the life period by 8.08 months.

The author advises, in consideration of the invariable fatal termination of the disease without interference, operation, as it offers the only hope, and, at worst, only terminates life by a short period.

McC. HAMILL.

A Case of Pemphigus Neonatorum Associated with Ceneral Infection by the Staphylococcus. (*New York Medical Journal*, February 5, 1898.) By L. Emmet Holt, M. D.

The author discovered the following condition in an infant nine days old admitted to the Baby's Hospital. There were many bullæ over the shoulders, buttocks and thighs. They ranged from a quarter of an inch to an inch in diameter. There were none upon the chest, back, feet, or hands, and only two upon the face. Some of them had evidently just appeared. These were flaccid with slightly turbid contents. Some had ruptured, revealing a deep red base which consisted of the cutis vera. Others showed superficial ulceration and were discharging pus. The child had a severe purulent ophthalmia discharging pus freely. The navel was normal; the pulse was good and the temperature was 98.2. The bacteriological examination of the pus from the eye showed a large quantity of pus organisms, but no gonococci. Examinations from the pus of one of the bullæ on the neck, and another on the thigh, showed pure cultures of the staphylococcus pyogenes aureus. The child's condition rapidly grew worse. The temperature became elevated, a semi-stupid condition manifested itself, new bullæ constantly appeared and developed rapidly. The child died from exhaustion about sixty hours after admission.

The autopsy showed the following conditions: The brain was moderately congested; the larynx was congested and covered with a fine grayish film which stripped off easily. There was no naso-pharyngeal membrane. There were large areas of atelectasis in the lower lobes of both lungs with emphysema anteriorly, and numerous punctate hemorrhages over the surfaces of both lower lobes. The general congestion was extreme. There were numerous punctate hemorrhages in the thymus gland. The liver and spleen were swollen and congested; the kidneys intensely so. The suprarenals were congested and showed small hemorrhages. The mucous membranes of the esophagus and stomach were slightly congested, and Peyers patches and the solitary follicles of the

colon were swollen and intensely congested. The mucous membranes were generally normal. Cultures from the lungs showed staphylococcus pyogenes aureus and the bacterium lactis ærogenes. Cultures from the spleen and left kidney showed streptococcus longus; from the liver, streptococcus longus and staphylococcus pyogenes aureus. The bullæ upon the skin showed pure cultures and staphylococcus pyogenes aureus.

While the author believes in the syphilitic origin of a certain percentage of cases of this condition, he feels that in some cases the condition is an acute general infection, and that the bullus eruption is only one of the manifestations of the condition. In the case above reported no history of syphilis was obtainable, and the bacteriologic investigations strongly suggest a septic origin.

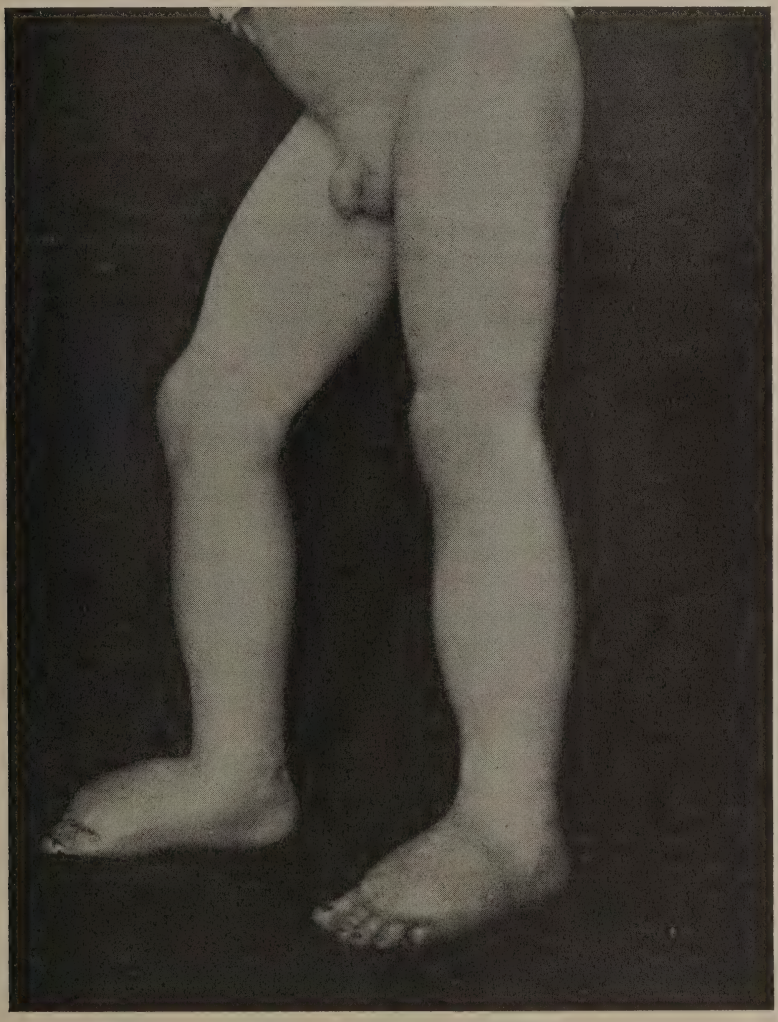
McC. HAMILL.

Two Cases of Congenital Elephantiasis. (*Archives of Pedriatrics*, March, 1898.) By John H. Jopson, M. D.

CONGENITAL ELEPHANTIASIS AT ONE AND A HALF YEARS.

The cases were in brothers, aged four and one and one-half years respectively. The feet, legs and penis were involved in the case of the older child and the feet and ankles in the younger. There was an edematous thickening of the skin and subcutaneous tissue of these parts, with some fibrous overgrowth, the swelling persistent and deforming,

bu ca si g little inconvenience. There was no apparent involvement of the blood vessels. Physical examination was negative and the general health wa excellent. An hereditary element was shown by the history of of a simila affection during the childhood in the father. The cases were apparently examples of congenital elephantiasis of the lymphatic type, due to dil tation and telangiectasis of the lymphatics of the corium and sub-cutaneous tissue.



CONGENITAL ELEPHANTIASIS AT FOUR YEARS

The disease is sometimes dependent on obstructions in the vascular system, particularly when occurring in the generalized form, and has also been attributed to a streptococcus inflammation in utero of the lymphatics (Moncorvo) and often by the parents to maternal impression.

The condition is not infrequently an inherited one, and when not pres-

ent at birth may develop after injury or in response to the natural growth of the individual. Treatment consists in the use of massage, bandaging, and electricity.

A Case of Gangrene of the Skin. (*Archives of Pediatrics*, Feb., 1898.) By David T. Marshall, M. D.

The author reports a case of this condition occuring in a five months old child. The child first came under observation the 20th of July. He was bottle-fed and lost weight persistently. Nine days after being first seen several nodular spots, having the appearance of mosquito bites, appeared beneath the skin. On the following day one of these spots, located in the mid-dorsal region just to the right of the vertebral column, showed a blackish center about the size of a split pea. Within six hours this had increased to the size of a cent and had a gangrenous appearance. It was surrounded by an area of inflammation extending to the size of a silver dollar. Encircling this area there was a narrow area, yellowish in color, having the appearance of pus. Beyond this the redness gradually faded. Six hours later there were a half-dozen such areas scattered over the body, the earlier ones being larger than the later ones. There was a quite active fever. The child died within 48 hours of the beginning of the illness.

The autopsy showed fifteen spots of the nature described. There were five or six small nodules, from about the size of a pea to a hickory nut, scattered through the various portions of the lungs. These were yellowish in appearance on the surface and indurated. The ileum and colon were slightly congested, and the mesenteric glands slightly enlarged.

McC. Hamill.

NEUROLOGY.

The Restoration of Coordinated Volitional Movements After Nerve "Crossing." (*The American Journal of Physiology*, Vol. I, No. 2.) By R. H. Cumingham, M. D.

Cumingham has performed a number of experiments on dogs to determine the degree of restoration of function after the peripheral end of a cut motor nerve is united with the central end of another motor nerve. He sutured the ulnar with the median: the musculospiral with the ulnar and median; the recurrens with the hypoglossus. He found that in the dog:

(1) The end of one mixed nerve may unite with that of another mixed nerve.

(2) The peripheral portion of the crossed united nerve recovers its function of conductivity before it recovers the property of electrical irritability.

(3) The cortical representation of groups of regenerated muscles supplied by the crossed and united distal nerve is the same as the cortical representation of the groups of muscles that were previously innervated by the central portion before its section.

(4) This cortical representation of the groups after crossing the nerves differs from that existing before the nerves are crossed, in that the cortical impulses produce inco-ordinate movements of the muscles supplied by the united crossed nerve.

(5) If two motor nerves supplying two groups of synergic muscles, whose action is to produce almost similar simple movements of an articulation be crossed, the resultant disturbance of the co-ordinated mobility of those synergic groups is exceedingly slight, as regards the performance of that particular movement.

(6) When groups of muscles innervated by the crossed nerves are of widely different functional use, antagonists, etc., the adult animal (dog) does not regain the power of performing intentional, co-ordinated movements with those muscles, although the fibres of the muscles completely regenerate and recover their formal irritability.

(7) If the peripheral portion of the motor nerve (recurrens) of rhythmically contracting muscles (those of the vocal cords) is crossed with the central portion of the motor nerve of non-rhythmic muscles, permanent abolition of the rhythmic motion of the former muscles occurs.

(8) The central nervous mechanisms do not adjust their impulses to suit the altered peripheral innervation.

SPILLER.

PATHOLOGY.

A Contribution to the Pathogenesis and Etiology of Diabetes Mellitus. (*Medical Record*, New York, Dec. 18, 2897.) By Heinrich Stern.

This paper constitutes the prize essay read before the Medical Society of the County of New York, 1897. From careful observation the author makes the following deductions:

Albuminous substances are of a highly complex structure, and the position of their molecules is easily disturbed. Even the slightest influence may cause an alteration in the latter's position, and thus plasmatic bodies are readily changeable or decomposed. There are numerous and varying phases in the process of decomposition of albumin. Some phases will recur often and are deemed normal; others will not recur regularly, and we may consider such phases abnormal.

There is no doubt that the decomposition of albumin under certain conditions will give rise to the formation of dextrose. In glycogen-free animals there will occur a new production of glycogen, if they are subjected even to none but nitrogenous food. Some of the C-H-O molecules of albumin may combine themselves to form a carbohydrate body or a series of similar compounds before their final and ultimate conversion in CO_2 and H_2O, in which form they leave the organism. The N molecule of the decomposing albumin will remain attached to some of the original C-H-O atoms, and may give rise to the simultaneous or alternate formation of a variety of non-colloid nitrogenous substances, as, for in-

stance, amido-caproic acid (leucin), $C_6H_{10}(NH_2)O.OH$; tyrosin, $C_9H_{11}NO_3$; carbamide, $CO(NH_2)_2$, and many others. The ultimate disposal of N molecules occurs in the form of ammonia. It is, moreover, not improbable that a part of the N molecule of albumin, without undergoing the different processes of transformation, is at once converted into ammonia.

If the formation of a glucose-resembling carbohydrate from the ingested proteids is a definite fact, then he sees no reason why the protoplasm of the living organism—under appropriate conditions—should not also be dextrose-generic.

It may be assumed that the molecules of the tissue proteids—when subjected to certain influences—are capable of altering their respective positions in a similar manner as do those of ingested albumins. That is, plasmolysis of the living tissues may occur, normally or abnormally, under the formation of a glucose-like substance. The generation of dextrose by the living protoplasm is not necessarily followed by the latter's spontaneous and complete dissolution. It may regenerate if its production of glucose is a normal process, or it may persist for some time—minus the molecules of the generated carbohydrate—if the process is an abnormal one. In the latter instance, however, there is then no protoplasm as such any more, and it is only a question of time until its ultimate destruction.

The healthy organism by plasmolysis may generate a dextrose-resembling carbohydrate normally, which in turn may undergo a series of conversions until its ultimate disposal as CO_2. One of these intermediate steps may be the formation of glycogen. In the diabetic condition the production of this amylaceous substance from dextrose may be decreased or totally suspended. The direct consequence of this would be diminished or no formation of fat, emaciation, and, if the dextrose has not undergone other alterations, hyperglykemia and appearance of the glucose in the excretions. The accompanying azoturia may be accounted for by an increased plasmolysis. The generation of dextrose by plasmolysis is, however, in all probability an abnormal process. In that case the plasmolysis is a catabolic process whereby the plasmatic substance cannot regenerate, and becomes disintegrated. This dissimilation of the living protoplasm occurs more in the character of a deterioration; that is, the protoplasm to all appearances may continue to exist, although it has lost its molecular integrity. This plasmolytic dextrose-generic process he designates as diabetic deterioration. In other words, diabetic deterioration is a more or less limited molecular disintegration of plasmatic tissue substance into a glucose-like body and a non-colloid nitrogenous compound.

Diabetic deterioration is always a systemic and general affection. The transitory form of so-called diabetes, the glycosurias of diverse origin—even experimental pancreatic diabetes—is in the first instance always the result of local disturbances. It is true, the causative factor of the deterioration may exert its influence upon the organism through only one

channel, but it will not affect one organ more than another, and all the protoplasm will lose its molecular integrity.

He classifies among diabetic deterioration, irrespectively of the percentage of dextrose present, all those chronic cases of glycosuria in which the excretion of the urea, the carrier of part of the N molecules of the tissues, continues to be permanently in excess; that is, when the amount of excreted N constantly, during a certain period, exceeds the quantity of that which has been ingested with the nourishment.

In order, therefore, to recognize diabetic deterioration definitely, the patient ought to be kept under rigid observation for some time. His food should always be weighed and the percentage of its nutritive constitutents approximately ascertained. This has to be done especially with its proteid matter. The excretions must be carefully measured or weighed, and the urine examined for glucose. Following this, an exact determination of the carbamide contained in urine and feces should be undertaken and its contents of N calculated. Finally the amount of excreted N should be compared with that introduced by the food. There are very likely other substances besides glucose and urea, as the result of a dextrose-generic plasmolysis, to be met with in the excretions.

The later stages of development of an individual and the following decade, seem to him to be that period during which dextrose-generic plasmolysis mostly occurs. Thus diabetic deterioration may be described as an affection following individual development.

The underlying causes of the disintegration of protoplasm and its resulting production of glucose and carbamide seem to be a part of a probable inherent quality of the protoplasm, of a purely physico-chemical nature. Whatever they may be, we can say with certainty, that digestive disturbances are never the main factors of diabetic deterioration.

CUTANEOUS AND VENEREAL DISEASES.

Remarks on Arsenical Pigmentation, with a Report of Two Cases. (*Journal of Cutaneous and Genito-Uuinary Diseases*, April, 1898, Page 184.) By W. A. Hardaway.

The author, after reporting two cases of arsenical pigmentation, raises the question whether there can develop such a staining without previous inflammation of the skin. He had been previously under the impression that the pigmentation following the use of arsenic was a gradual process not preceded by congestive or inflammatory lesions. The standard textbooks seem to concur in this opinion. The cases reported are briefly as follows:

Case 1. A medical student, aged twenty-five, had ben taking Fowler's solution in maximum doses of twelve minims thrice daily for a number

of days, to gain relief from an occipital neuralgia. A maculo-papular rash developed, which was followed by desquamation and a dark brown pigmentation.

Case 2. A girl of nine or ten years of age was brought to the author by a neurologist for a dirty brown or grayish mottling of the skin. The child was an epileptic and had taken Fowler's solution over a long period of time. The pigmentation occupied the regions previously covered by a morbilliform rash which was followed by desquamation. The author called attention to the fact that in both cases the pigmentation was confined to the former site of the eruption.

SCHAMBERG.

Report of Inspection of Prostitutes in Rotterdam for the Year of 1897. (*Dermatologisches Centralblatt*, p. 213, April, 1898.) By Dr. Mees, Police physician.

In Rotterdam, with a population of about three hundred thousand, where clandestine prostitution is not exactly rare, there were during the year of 1897 four hundred and ninety-two women registered at the police headquarters. Of this number forty-five women lived in brothels and the remainder lived alone. During the year 4609 examinations were made, 985 being in houses of prostitution. As the result of these examinations ninety women were found to be diseased, of whom seven were brothel-women. A classification of 73 cases observed from April 1 to December 31 showed 17 to be affected with syphilis, 9 with chancroids, 45 with gonorrhea and 2 with parasitic skin diseases. A few cases of women with urethral catarrh were observed in whom repeated examinations failed to reveal the presence of gonococci. On the other hand 13 cases of gonorrhea exhibited no discharge whatever, but microscopic examination demonstrated intracellular diplococci not stained by Gram's solution.

SCHAMBERG.

Contribution on the Histogenesis of Carcinoma of the Skin. (*Il Policlinico*, February 15, 1898.) By B. Marpurgo.

Marpurgo describes the histologic features of a squamous carcinoma developing in a part of the skin affected with lupus, and discusses the theories of Ribbert and Hausemann as to the origin of carcinoma in general. Regarding the histology of his own case it is interesting to note that the giant cells were present in the epithelial processes. As to the origin of such giant-cells there is much difference of opinion—some claim they are epithelial in nature; others, that they represent a pseudotuberculosis lesion; i.e., are due to the presence of foreign bodies [the "Fremdkörpertuberkulose" of the Germans]. Marpurgo does not commit himself, but merely states that tubercle-bacilli were present in the giant-cells in his own case. This fact would at least preclude pseudotuberculosis.

The author's case does not offer sufficient data to decide between the

opposing theories of Ribbert and Hausemann. According to Hausemann's, Hauser's, and Hanau's views the essential feature of carcinoma is a primary morphologic and functional transformation of the epithelium. Ribbert, on the other hand, holds that the fundamental feature is an invasion of the epithelium by the connective tissue. The latter insinuates itself between the epithelial elements, which, separated from their natural milieu unfold their normal, hitherto latent, energy of growth. In this case an invasion of vascularized connective tissue into the epithelial layer could readily be demonstrated, and this vascularization is sufficient to account for the abnormal proliferation without postulating a fundamental modification of the epithelial cells, as is required by Hausemann's theory.

RIESMAN.

PRACTICAL NOTES.

Treatment of Gonorrhea.

Dr. Jules Janet ("Revue de Thérapeutique," December 15, 1898), in a lengthy article on this subject, takes up the various complications of this affection. He divides extra-urethral foci into three classes : (1) prostatic foci ; (2) foci of the glands of the anterior urethra ; (3) the congenital para-urethral crypts and canals of the fossa navicularis and meatus. In order to find the prostatic foci, the patient is directed to urinate in two glasses and still retain some urine in the bladder. This done, he expels as much urine as the anterior urethra can contain, and the prostate is massaged; one or more drops of an aqueous liquid, white or yellowish-white in color, may then appear at the meatus. This should be received on the glass slide and examined; if leucocytes and gonococci are present, they confirm the existence of a gonorrheal focus in the prostate ; if only leucocytes are present, the physician should still suspect prostatic infection and treat the patient accordingly. In these cases massage of the prostate often enables one to detect small indurated nodules, especially along the superior and lateral borders of the gland, and sometimes in the mass of the tissue itself. Again, there may be no prostatic anomaly perceptible, but more or less purulent liquid can be extracted. If this massage shows no drop at the meatus, the patient is told to evacuate the remainder of the urine contained in the bladder. If this third glass is more cloudy than the second, an analysis should be made; the character of the prostatic secretion can be ascertained. Search is made for glandular foci of the anterior urethra in the same way, massaging of the urethra instead of the prostate. If, after micturition, a purulent drop is obtained, with or without gonococci, the physician may expect infection of the urethral glands. Quite frequently he can detect in these cases small indurated nodules along the urethral canal. Sometimes they offer resistance and do not disappear on pressure, but more often they appear to sink into the urethra. They sometimes form

para-urethral abscesses, and if allowed to follow their natural evolution they open by small orifices either on the sides of the frenum or the inferior angle or on the lips of the meatus. Sometimes they open simultaneously into the urethra and on the exterior, thus forming a fistula. The congenital para-urethral crypts and canals are often found in the neighborhood of the meatus. They are especially frequent in hypospadias. They are formed either by a large lacuna situated at the superior angle of the meatus or by different canals situated along the sides. As many as eight have been found in the same subject. The treatment of prostatic foci consists simply of massage of the prostate before each permanganate irrigation. The treatment of foci of urethral glands opening into the urethra consists in massaging the anterior urethra before each irrigation. If a para-urethral abscess does not open into the urethra, it should be opened freely and the wall curetted. If the abscess communicates with the urethra, the same procedure should be adopted. The urethral orifice should be found, and a silk thread should be passed by way of the meatus and should be allowed to remain. This keeps the fistula open and permits the liquid used in irrigations to pass along the silk. The fistula easily closes of itself when the gonococci disappear. Several cauterizations with the galvano-cautery aid in closing the opening. As to the para-urethral crypts and canals, they should be incised from the side of the urethra, so as to make a large communication between their cavity and that of the urethra. For this purpose the author has had a small automatic instrument made. It is composed of a fine cannula sound, which is attached to the blade. The sound is introduced to the depth of the para-urethral canal. A button on the blade is pressed toward the urethral orifice; the blade is pushed the length of the sound, and it cuts from one end to the other wall that separates the canal from the urethra. Irrigations soon complete the cure. The author finds his method of treatment satisfactory. In some cases the patient becomes accustomed to the permanganate, and it is advisable to use citrate of silver, 25 to 1,000, a few times and then to return to the permanganate. In the treatment of gonorrhea complicated with stricture, if the stricture is sufficiently large (15 F. or more) not to provoke retention or to cause urethral obstruction under the congestive influence of irrigation, it should be left alone until the gonococci have disappeared, and then any necessary dilatation may be practiced. If, on the other hand, the stricture is very narrow and if there is vesical retention, it would not be prudent to follow this method of treatment, as there would then be the risk of complete retention under the influence of irrigation. In such cases dilatations and irrigations could be practiced simultaneously. The patient should evacuate the bladder, and a small irrigation of borated water should be made. The bladder should then be filled with the borated water. Next, dilatation should be practiced, after which the patient should evacuate the borated water; and then should follow a complete irrigation with permanganate, 25 to 1000, during the first séances. When a No. 18 sound can be passed, dilatation may cease and the irrigations may be completed, dilatation being resumed later. When cystitis complicates gonorrhea

it may be the result of irritation of the bladder by the soluble products coming from the posterior urethra, or it may come from an extension of the inflammation of the posterior urethra to the bladder wall, or it may perhaps be due to infection by a secondary microbe—the bacillus coli or other cocci. The gonococci are so rarely encountered in cystitis that one can say that practically they are not cultivated in the bladder. The large number of cases of gonorrheic cystitis are due to irritation, as one can easily recognize by analyzing the second glass of urine. The treatment in such cases is the same as for ordinary gonorrhea, care being taken to use weak solutions in the beginning and to introduce only small quantities of liquid successively into the bladder. Permanganate solutions cause the soluble products due to the urethral gonococci and the inflammation that they occasion to disappear. If, on the contrary, the cystitis is infectious—which fact will, on analysis of the urine, be recognized by the innumerable microbes, coli bacilli, or cocci—the treatment by permanganate will suffice to exterminate the urethral gonococci, but will have little action on the secondary microbes contained in the bladder. One should, nevertheless, resort to disinfection of the bladder by silver salts, but it is more simple to unite the two treatments by mixing in the same solution the desired quantity of each drug. If prepared immediately before being used, these substances do not act upon one another. The author generally uses twenty-five centigrams of permanganate to one thousand parts of water, and adds twenty-five centigrams of nitrate of silver or five centigrams of sublimate. If the secondary infection persists after the disappearance of the gonococci, one may use irrigations of nitrate of silver or of the citrate, which is not so painful as the former. In the treatment of gonorrhea complicated with orchitis, the author has attempted the usual irrigations during the acute stage, but against his better judgment. Traumatisms caused by these irrigations exaggerate rather than allay the congestion of the epididymis. It is preferable in these cases to suspend treatment during the acute stage. The acute period passed, large irrigations of the permanganate soon effect a cure. In case of prostatitis the same procedure should be followed. In the presence of general complications of gonorrhea, rheumatism, endocarditis, meningitis, and conjunctivitis, the urethral treatment should be pushed whether the urethritis or its complications are very acute or not. In a case in which the general complications are due to the toxins of the gonococci—and these cases are frequent—a cure of the general affection will be obtained by use of the irrigations; if, on the contrary, the case is due to a generalization of the gonorrheal infection, the treatment will have no effect. It is necessary, however, always to practice the irrigations, in order to eliminate the primary foci of infection and the toxins which it produces, and to attack the extra-urethral focus if it is accessible.—"Medical Record."

Diet in the Summer Diarrhea of Infants.

S. Henry Dessau ("Clinical Recorder," 1897) is of the opinion that in an acute attack of summer diarrhea in a child under 2 years of age all albuminous and starchy foods should be withheld at once. Milk and the

milk foods only tend to furnish fresh fuel for the growth of pathogenic bacteria in the gastro-intestinal tract. Give instead toast-water, made by laying in a large bowl two pieces of stale white bread toasted brown on both sides; pour on boiling water till covered; add a pinch of salt and allow to stand till cool. The clear water is then poured off into a fruit-jar and kept cool by the ice. Barley-water, made by boiling a handful of pearl barley in a pint of water for one hour or more, a pinch of salt being added, can also be prepared, and after it is cool the supernatant liquid can be poured off for use. From one to three tablespoonfuls of either of these foods can be given every hour or two for forty-eight hours if necessary. They contain a considerable percentage of nutriment which is easily digested, and, if properly prepared, are rarely vomited. Alcoholic stimulants may be added if necessary. These drinks should always be given cold, as they are thus more grateful to an exhausted and feverish infant.

When the vomiting and stools have improved, which, with proper therapeutics, usually occurs within forty-eight hours, nursing may be resumed at intervals of either two, three, or four hours, according to age.

In deciding the question as to the best form of food to use with artificially fed babies, it must be borne in mind that the food that is the cheapest and easiest to prepare is the best for most persons. If sterilized milk be used it should not be for longer that the summer months, on account of the tendency to produce rachitis. The modified milk is expensive and can only be obtained in the large cities.

For ordinary cases a mixture of cow's milk, diluted one-fourth with water and containing a little cane or milk-sugar and a pinch of salt or sodium phosphate, is to be preferred. A double boiler lined with porcelain, or made of agateware, can be obtained at any good housefurnishing store; into this the prepared milk is placed and the water in the outer vessel is allowed to boil for fifteen minutes. The inner vessel is then rapidly cooled by standing in cold water, and the contents poured into a well-scalded tight fruit-jar, and kept by the ice until required for use. The entire quantity required for use during the day can thus be prepared at once.

Occasionally it will be found that some other food must be used for infants recovering from a severe diarrhea. A combination of barley-water or barley-flour, a tablesponful rubbed smooth in a little water, and added to the diluted milk, may then be used with good results. To insure the thorough digestion of the starch that this contains, diastase or taka-diastase should be added.

Overfeeding must be carefully avoided. Every step in the preparation of the food and in its administration must be made with scrupulous cleanliness, and after each feeding, the child's mouth should be wiped out with a bit of absorbent cotton wrapped around the little finger and then soaked in a saturated solution of boric acid. If the child appears thirsty, plenty of water that has been boiled and cooled should be given rather than too much food, for water is as necessary to the child as it is

to the adult in addition to the food.—"American Medico-Surgical Bulletin."

The Treatment of Whooping-Cough.

Marfan ("Journ. de Méd.", March 10th, 1898) points out the two leading features in the prognosis of whooping-cough—first, the number of attacks of whooping cough; secondly, the supervention of broncho-pneumonia; the former giving rise to various hemorrhages, epistaxis, meningeal, cerebral, and otherwise, as well as various mechanical effects on the lungs, the second causing serious change in the lung tissue and constitutional effects. This complication may be immediately ascertained by the presence of temperature as the spasmodic condition is afebrile. From this it may be gathered that the therapeusis of whooping-cough may be divided into—first, the treatment of the spasmodic condition; secondly, pneumonic. For the first, the writer particularly makes use of three remedies—belladonna, antipyrin and bromoform, the dosage varying with the age of the patient. In the case of belladonna, the quantity should be increased daily, until the severity of the spasmodic attacks is reduced. Unfortunately it not infrequently happens that the physiological effects of the drug manifest themselves before the cough shows any diminution. This is the great drawback to this drug. Antipyrin is administered with syrup of orange. Like the former, the dose may be increased daily till the maximum is reached. Its effects are often extremely good, but the objection to its use is that should there be any symptom of broncho-pneumonia it must be stopped, as its depressing action may be conducive to dangerous symptoms. Bromoform, the writer thinks, is likely to replace both of these drugs. As it is soluble only in alcohol and glycerin, its administration is sometimes a little difficult, but Marfan prescribed it with an emulsion of almond oil and mucilage flavored with orange. The child may get up to 3 drops if about 6 months old; 8 drops when 2 years old; and when over 5 years of age from 20 to 30 drops. The first symptom of intolerance is drowsiness, and, as this requires large doses, it follows that the drug is not dangerous when used with ordinary precaution. One important point is that during the first stage of its administration the attacks of whooping-cough may be slightly more marked, after which they subside. Another point worthy of note is that bromoform has no injurious action on the broncho-pneumonia. It is difficult to know if this drug has any power to shorten the duration of the disease, and the writer, from his observations, is inclined to think that it does so. As to the broncho-pneumonia, Marfan states that it is much more liable when there is rhinitis or lesion of the buccal mucous membrane, and that it is important that all cases complicated by broncho-pneumonia should be separated from others. The treatment is the same as in any other case, but the anti-spasmodic treatment should be continued, for the author denies, that as stated by some, broncho-pneumonia arising in the course of whooping-cough, has any beneficial effect on the disease. As to the management of the case, Marfan has come round to the opinion that cases of whooping-cough should not be allowed out, as they do better, especially in

towns, by remaining absolutely indoors, but it is advantageous to change the case into a different room for the night. So soon as the whooping character of the cough has disappeared, the author recommends change of air, especially to the seaside, as the patient usually has some cough which may last for a considerable time. The duration of the contagiousness extends over the whole period of spasmodic cough, though some consider that it is only the invasion period that is dangerous.—"British Medical Journal."

The Treatment of Nephritis.

Acute nephritis is by no means so frequently met with as the more chronic inflammatory conditions which produce such disastrous results; yet it is sometimes seen, either as the result of the ingestion of irritant substances or of the presence of severe infections. Some persons have gone so far as to assert that acute nephritis may result from severe exposure. Whatever its causes may be, if it is of a severe character a train of symptoms familiar to experienced clinicians assert themselves. There is a condition of malaise, with anorexia and perhaps nausea and vomiting, while if the condition of the kidneys be grave these symptoms may be followed or supplanted by violent headache, followed by delirium, convulsions, and coma, during which the heart will be found acting laboriously and the pulse will be of high tension. The urine will also be decreased in quantity and the patient may develop rather a typhoid appearance. This condition may last, if not so grave as to produce death early in its course, for several weeks, and at that time, unless the case has been badly treated or has been unusually severe, recovery takes place, or at least the patient becomes so improved in health as to consider himself well.

The most important thing to do for any patient who is suffering from mild or severe acute inflammation of the kidney is to insist upon absolute rest, the patient remaining in bed not only for the rest, but also in order that the surface of the body may be protected from draughts and colds. A liquid diet, consisting largely of milk, should be insisted upon, and this liquid diet has the additional advantage that it will tend to increase the quantity of urine and so help to wash from the kidneys the effete materials which it is the function of these organs to eliminate. On the other hand, it must not be forgotten that during the course of acute nephritis the kidneys are unable to eliminate as much fluid as they can in health, and the too free administration of liquids under these circumstances may to some extent aid in increasing the tendency to dropsy. For this reason scantiness of urine in acute nephritis is not to be considered as a very grave symptom, but if it becomes exceedingly scanty and does not show evidences of being thoroughly laden with excrementitious matter, and if it seems probable that this failure of action on the part of the kidneys is due to congestion, it then becames the physician's function to relieve the congestion by one or several measures. Dry cups or even wet cups may be applied over the lumbar region, provided that hot compresses applied to this area for an hour or two fail to relieve the congestion. Or

in other cases it may be well to cause a flow of blood to the surface of the entire body by placing the patient in a hot wet pack.

As purgatives not only relieve congestion of the abdominal viscera directly, but also seem to indirectly stimulate the kidneys to increased secretion, probably by relieving engorgement, and as calomel is a purgative which is supposed to possess considerable diuretic power, this or some other more rapidly acting drug, such as the sulphate of magnesium, may be given, and this will also aid the body in eliminating poisons through the bowel. Should the arterial tension be great, we are not to forget that in the presence of acute inflammation with high arterial tension, aconite and chloral are valuable drugs which are best given in small doses rather frequently rather than in full doses far apart. Should evidences of cerebral congestion manifest themselves, it may be necessary to resort to hot foot-baths or to actual venesection, the patient being also purged by repeated small doses of Epsom salts. As the end of the period of acute inflammation is approached, the anemia, which has probably been gradually increasing, is to be combated by the use of iron and arsenic, though the latter drug is to be administered cautiously lest it irritate the kidney, and solid food may be employed in place of the liquid diet heretofore insisted upon. Oxygen inhalations are also useful to some of these cases. The greatest attention should also be paid to maintaining an active condition of the skin by frequently sponging it with alcohol, or if the patient is strong enough, by frequent washings.

Where the condition of the kidneys is more chronic, or in other words subacute nephritis is present, the patient should be advised, if possible, to resort to a warm and equable climate, to clothe himself most carefully, to avoid wetting the feet, and to limit his diet both as to fluids and solids. The rule in regard to fluids should be that they should not exceed to any great extent the quantity of urine which is passed, although, of course, an amount of liquid over and above that which is passed must necessarily be swallowed to make up for that which is lost through the skin and lung. This is particularly necessary in patients who are suffering from dropsy, more or less well developed. Should the patient not be passing water freely, copious draughts of fluid may be given to him with the object of aiding his kidneys in getting rid of the quantity of urea which should normally be eliminated and which amounts approximately to about 500 grains. If the physician is properly cautious he will from time to time analyze the urine to determine whether the normal quantity of urea is being eliminated, and should it constantly fall below the normal he will know that there is danger of the development of uremia and cerebral symptoms, and arterial tension should be lowered and diuresis encouraged by the use of nitroglycerin. If the dropsy in any case is sufficiently severe to result in large effusions into the various visceral cavities, there is nothing to do but to recognize the fact that the condition of the kidney is grave; that the prognosis is distinctly unfavorable, and the only measure of relief in addition to those named is the use of tapping for the purpose of drawing off the liquid. If, as occurs in some cases, where the disease is advanced, arterial tension is depressed rather than raised,

digitalis in the form of the infusion, which contains more of the diuretic principle of the digitalis (digitonin) than alcoholic preparations of this drug, should be employed for the triple purpose of stimulating the heart, the arterial system, and increasing urinary flow.—"Therapeutic Gazette."

Treatment of Psoriasis and Eczema with Systematic Scarifications.

Jacquet has thus treated several hundred cases, but in his report restricts his description to eleven cases followed to date in the last two years. The success has been complete and permanent. The patches disappear without leaving a trace, a fact much appreciated by society women unable to appear decolletées previously, and artists whose hands had been affected. He only attempts this treatment in disfiguring, chronic, well-defined lesions, especially in psoriasis, after the failure of other methods. In eczema he finds the resistance to the desired effect increases progressively from the acute to the lichenoid form. He first softens the part with a permanent, soft potato cataplasm, not warm, frequently renewed, without antiseptics or oiled silk. The patient comes to the séance still "under the cataplasm." The scarifications are made in parallel lines, one to three millimeters apart, never crossed, in the superficial layer of the derma. The surface is allowed to bleed ad libitum, the bleeding promoted by tepid water, after which a folded piece of moist mull is applied and the patient returns to his cataplasm until the next séance. Six to sixteen are required. The scarifications are very slightly painful, even to children.—Abstract in "Journal of the American Medical Association."

Treatment of Obesity.

Robin ("Rev. de Therapeut," December, 1897) treats obesity as follows: At eight a.m. the patient receives a boiled egg and two-thirds of an ounce of lean meat or fish—the whole to be eaten cold and dry. A third of an ounce of bread and a cup of weak and very hot tea without sugar complete the repast. At ten o'clock a second meal is given, consisting of two boiled eggs, one-sixth of an ounce of bread, and five ounces of water, wine, or tea. At noon the meal consists of as much cold meat as is desired, without bread, but with salads served with salt and lemon-juice. If the patient craves bread very badly, an ounce may be permitted. He also receives from three to five ounces of green vegetables served with butter. Farinaceous articles, and those extremely sweet, are absolutely forbidden. Three to five ounces of raw fruit may be allowed as dessert. Two glasses of water may be drunk with this meal, and a quarter of an hour later a cup of weak tea without sugar. Another cup may be given at four o'clock. Finally, at seven o'clock, the same meal may be taken as at eight in the morning, with the fish or meat warmed, if preferred, the amount not to exceed three ounces. The patient should walk half or three-quarters of an hour after each repast; that is to say, five times daily. He should take vapor baths, followed by general massage; should never sleep in the daytime, and not more than seven hours at night. Of the various systems of medication proposed to reduce flesh, Robin has this to say: The thyroid preparations are unreliable and are not without dan-

ger. Iodid of potassium will diminish the amount of flesh, but produces accompanying ill effects, such as shrinking of the glands. Treatment by mineral waters is only efficacious as long as it is continued, and should be regarded as a mere adjunct of dietetic treatment.—" Medical News."

Dysuria and its Treatment.

Mendelssohn (" Therapeutische Monatshefte," January, 1898), in discussing the causes of dysuria, includes the conditions in which there is a purely mechanical obstruction and those in which there is increased frequency of micturition, and, finally, strangury in consequence of pain on the passage of any amount of urine. In the case of the purely mechanical obstruction to the flow of urine, the condition may be either weakness of the bladder itself or the presence in the urethra of an obstruction due to scar contraction or prostatic hypertrophy. In stricture cases the bladder wall usually possesses its normal musculature or it becomes hypertrophied while in the prostatic cases some weakness is generally present. In this connection might be included those cases in which the bladder is involved in paraplegia, paralysis caused by voluntary retention until the muscular coat is distended and weakened, and involuntary retention in persons who are unconscious.

The treatment of such conditions is to remove the obstruction by operative or mechanical means and to insure the regular emptying of the bladder. The second form of dysuria, that with increased frequency and necessity of immediate emptying of the bladder, is generally dependent upon an increased irritability of the mucous membrane. The starting-point for this reflex impulse which necessitates an immediate emptying of the bladder, though it may only contain a few drops of urine, is the muscular tissue around the prostatic portion of the urethra and the muscle of the bladder walls. There is a loss of the normal co-ordination between the two, both contracting at the same time, and the final result is that a small amount of urine is squeezed past the contracted sphincter with a great deal of distress to the patient. The pathological condition which is sometimes found is that of an old inflammatory thickening of the walls, but the disease is much modified by individual conditions, such as anemia, neurasthenia, and excessive drinking. The treatment is to remove the underlying disease by improvement of the general condition, diet, bicycling, and the correction of any alcoholic or sexual excesses. The third form is characterized by the increased pain referred to the bladder, especially at the time of micturition. The causes are inflammation of the mucous membrane or of the posterior urethra, residual urine from any cause, and calculi in the bladder. Treatment is, of course, operative when that is possible; if it is not, rest in bed, the use of hot sitz-baths, and local bloodletting, the employment of narcotics only as a last resort.—" New York Medical Journal."

(198) Exercise Treatment in Nervous Diseases.

Goldscheider (" Deut. med. Woch.," 1898, Nos. 4 and 5) more especially refers to tabes dorsalis and some other diseases. He maintains that

the ataxia is due to a disturbance of the muscular sense. He first learned to use exercise treatment in v. Leyden's clinic; but this method has been subsequently largely extended by Fraenkel. In the so-called paraplegic stages of tabes, slight flexions and extensions, etc., of the limbs may be made when the patient is in bed. Help may be given by lightly supporting the thigh or leg. A chair may be inverted over the foot of the bed, and the patient can then exercise himself in touching the cross bars or by putting the feet in between them. The movements are first made with the eyes open and afterwards with closed eyes. Ample periods of rest must be allowed so as not to produce fatigue, otherwise an exhaustion lasting over several days may result. The author confirms Fraenkel's opinion that even in these advanced cases improvement may be produced and the patient may even walk again. Some patients do not improve, and sometimes the exercises have to be given up owing to the pains which are apparently induced by them. In less advanced cases various movements may be practiced to improve the gait, and the author figures many pieces of apparatus adapted to this end. A chair on four legs with rollers may be useful. The treatment must be persisted in over long periods of time. The chief point lies in many movements performed without fatigue and with intervals of rest. The author draws attention to the absence of the sence of fatigue. In some patients there is an atony of the muscles, and here electricity and massage must be employed as well. The knee and hip joints may be supported by bandaging. The author then refers to the treatment of intentional tremor by exercises. He looks upon this tremor as closely allied to ataxia, and as capable of improvement by exercises. In chorea some improvement may also be produced, but the exercises should be carried out only once in the day or once in two or three days. The good effects of this treatment in writers' cramp are well recognized. In athetosis also some improvement may be produced by long-continued exercise treatment. In speaking of paresis and muscular atrophies the author draws attention to the value of exercises carried out in a bath, and especially in peripheral neuritis. In neuralgias, etc., exercises, particularly of a passive form, may be useful. In articular pains left after rheumatism, and more especially after contusions, this treatment is valuable. Goldscheider thinks that much more attention should be given to exercise treatment.—" British Medical Journal."

Principles of Treatment in Puerperal Eclampsia.

Potter, of Buffalo, after practical experience, advocates principles that may be grouped under the following heads:

1. Though the pathogenesis of eclampsia is unsettled, it belongs solely to the pregnant of puerperal state. It is not apoplectic, epileptic, or hysterical in character.

2. It depends on toxemia due to over production of toxins and under-elimination by the emunctories.

3. These toxins probably have their origin in the ingesta, in intestinal putrefaction, in fetal metabolism, one or all. There is co-existing sluggishness, impairment, or suspension of elimination.

4. When the prodromata of eclampsia appear the kidney should be interrogated as to its functions, and all symptoms carefully watched.

5. Treatment is (*a*) preventive and (*b*) curative. Preventive treatment is medicinal and hygienic; curative treatment is medicinal and obstetric.

6. Milk diet and distilled water should be given in the pre-eclamptic stage to dilute the poison, hasten its elimination, and nourish the patient.

7. Blood letting should only be employed in plethora or syanosis. It is liable to cause anemia if persisted in or repeated.—"American Journal of Obstetrics."

Treatment of Vomiting of Pregnancy.

Geoffroy ("Bull. Gen. de Therapeut." December 15, 1897) is convinced that the condition of nausea and vomiting of pregnant women is due to reflex contracture of the digestive tube; that such contracture is located either at the pylorus and the different portions of the small intestine, or more particularly in the iliopelvic angle of the colon, and that this painful contraction at this angle is a pathognomonic sign of reflex hyperesthesia of the intestinal canal, of which the morbid symptoms vary from slight pain about the heart to simple nausea or to uncontrollable vomiting. By the slow, light, progressive movements of massage, with the balls of the fingers, he is able to cause the passage of gas and liquid through this region with gurgling sounds distinguishable both to the physician and to the patient. Usually two or three séances of this light massage are sufficient to cause the vomiting to cease altogether, though the treatment may be repeated as often as necessary without fear of ill results. This procedure has been employed by the writer with complete success in a number of obstnate cases.—"Medical News."

The Treatment of Acute Articular Rheumatism by Intravenous Injections of Sublimate.

Dr. Gustav Singer details the process as follows: The arm is left hanging over the edge of the bed, in order to bring the veins into prominence, or a compress above the elbow is employed for this purpose. The skin in the region of the elbow is then disinfected, first by energetic rubbing with soft soap and warm water, next with a one-tenth per cent. sublimate solution, and lastly with ether and alcohol. A sterilized syringe provided with an asbestos piston is filled with the solution and inserted into the lumen of the vein in the direction of the blood-current and parallel to its course. As soon as the color of the solution in the syringe has indicated that the needle has entered the vein (blood entering reddens the solution), the compress is removed and the injection is slowly made. The point of insertion is covered with the finger, the needle removed, and the opening closed with iodoform-gauze and an appropriate bandage. The solution employed is: corrosive mercuric chloride, 1 or 2; sodium chloride, 1 or 2; distilled water, 10. The dose of sublimate is from $\frac{1}{6}$ to $\frac{1}{3}$ grain. The only difficulty is found in the insertion of the needle

into the vein. Sometimes a little blood escapes from the vein under the skin, forming a small but painless sugillation. The injection can be made alternately in each arm. Six to ten injections in the course of treatment, at most, being necessary, it is well to begin near the wrist, and later inject nearer the elbow. If the weaker solution is employed, daily injections are in order ; if the stronger, then once in two days is sufficient. The mouth and teeth must be carefully looked after and cleansed. For this purpose potassium chlorate is used as a mouth-wash. Of the eleven patients under observation, one developed diarrheal stools, with small amount of blood, and two albuminuria; but casts were not found. The results which were observed from this treatment were : 1. The pains were lessened, and consequently sleep was permitted. 2. Swelling was remarkably diminished in the joints primarily affected, but secondary infection of other joints was not prevented. This is not an argument against the use of this method, for it occurs with others—e. g., the use of salicylates. 3. If the injections are given in the morning, the expected rise of temperature is postponed for several hours, lessened, or abolished altogether. The indications of this method are : Acute articular rheumatism of infectious initial processes (erysipelas, phlegmon, puerperal affections) or peculiar history (chills, recurring endocarditis, frequent exacerbation, protracted sub-acute course, metastases) which point towards a pyemic character. In acute disease, when the salicylates are forbidden, or when the inflammation is localized in single joints, this method is recommended. The contra indications are to be found in very weak individuals, severe renal degeneration, and by onset of severe symptoms of poisoning.—" Centralblatt für die Gesammte Therapie " : " American Journal of Medical Sciences."

The Treatment of Gastro-intestienal Influenza.

In the " Presse Médicale " for February 19th, M. L. Landouzy lays down the following rules to be carried out in the treatment of this affection : The catarrhal gastro-intestinal condition should be treated ; the condition of the patient's strength should be modified ; the vascular tension should be relieved ; and the patient should be depurated and nourished. Modifications in the nutritive and functional qualities of the mucous membrane of the stomach and of the intestine should be brought about ; diuresis should be provoked ; and a stimulation of the nervous system should be brought about which will accelerate and regulate the specific function of each apparatus.

The treatment, which should be instituted immediately, is to be carried out in the following manner : 1. In a third of a glass of warm water two capsules, each containing eight grains of powdered ipecac, are to be given at an interval of five minutes. 2. Do not allow the patient to drink anything until after vomiting has occurred and he no longer feels nausea ; then either a cupful of good, hot, black coffee or hot grog may be given. 3. At noon and at night administer a warm enema of nine ounces of boiled water in which a hundred and fifty grains of sodium borate have been dissolved. 4. Apply permanently over the abdomen from the epigastrium to the pubes a large, light, and hot poultice. 5.

In the afternoon administer a hypodermic injection, consisting of three ounces of boiled distilled water and twenty-two grains of sodium phosphate, in the abdominal wall. 6. In the evening introduce into the rectum, half an hour after the enema has been evacuated, a suppository containing seventy-five grains of cacao butter and eight grains of quinine hydrochloride. 7. Frequent washing out of the mouth and throat should be done with a solution of two hundred and twenty-five grains of boric acid in sixteen ounces of boiled water. 8. Drinks, such as iced milk or bouillon, in small quantities at a time, may be given, also sparkling champagne diluted with water ; solids, such as meat jelly, cream, and mulled eggs may be given.

On the second day the same treatment is to be carried out, with the exception of the use of ipecac. On the third day an injection of artificial serum may be added to the treatment, and apple sauce and stewed fruits to the diet. During the following days a hypodermic injection of artificial serum may be administered every other day, and the employment of the enemata and the lavage of the throat should be continued. The diet may be increased as follows : Soup, buttered eggs with asparagus tops, boiled lettuce, potato soup, and cooked fruits. After convalescence has set in the patient should still remain in bed for five days, and return progressively to an ordinary diet, which may consist of lamb, eggs, cooked green vegetables, dried-vegetable soups, cooked fruits, etc. ; as a drink, champagne may be continued. With the first meal in the morning a pill containing a milligram of strychnine arsenate and a sufficient quantity of pulverized licorice root is to be taken. Directly after the midday meal and the dinner a teaspoonful of the following mixture is to be taken :

Cinchona wine (made with old Malaga)..	14 ounces
Sodium phosphate	225 grains
Syrup of bitter-orange peel	525 grains

M.

Night and morning the body should be subjected to an energetic rubbing for six minutes with a flannel glove saturated in lavender water. It is well to prolong the rest in the house for some days, even when the patient feels completely restored, to avoid any change of diet, and to guard against suddden cold, which, during epidemics of influenza, may cause a fresh attack of catarrhal inflammation.—" New York Medical Journal."

Treatment of Diarrhoea.

A few doses of the following mixture, limiting the food at the same time to water-arrow-root, with a little brandy, will quickly cure many of the slighter forms of acute diarrhea :

℞		
	Sodii Bicarb.	gr. lx.
	Spir. Ammoniæ Aromat.	ʒiij.
	Tinct. Cardamomi Comp.	ʒVj.
	Aquae Cinnamomi to	ʒVj.

M. f. mist. Two tablespoonfuls to be taken every two or three hours until relieved.—" Practitioner."

INTERNATIONAL MEDICAL MAGAZINE

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Edited by
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The Invasion of Cuba.

Should President McKinley send an army of invasion to Cuba it will campaign under far more favorable circumstances than any large body of tropical invaders in the past. It is well understood that the most vital problem of successful warfare in a strange climate is the maintenance of the health and strength of the invading army. In tropical climates the endemic diseases, particularly fevers and intestinal disorders, are as formidable opponents as the native armies; in fact in Cuba, the chances of sickness or death from disease are greater than being maimed or killed by shot and shell, even of the new and formidable type.

The whole nation is alive to these real dangers of a Cuban invasion. The enormous mortality from disease in the Northern armies of invasion during the war of the Rebellion is indelibly marked in the American mind; the horrible example of the slaughter of the Spanish recruits in Cuba by disease is before every one. Any army from the United States will depart with an intelligent comprehension of the necessity of the strictest hygienic precautions. In this campaign the real governing officer will be the sanatarian, and he must have the heartiest coöperation of the naval, military, and civil authorites in every branch of governmental service.

Fortunately, the present Surgeon-General of the army, Dr. Sternberg, is an authority on tropical diseases and a leading expert on yellow fever. His official rules and regulations and private suggestions will be of the greatest importance, and should have the fullest endorsement. By the strictest attention to sanitary details General Butler and a Northern army lived healthfully in New Orleans in spite of predicted evacuation in the yellow fever season. New Orleans has been virtually exempt from those frightful annual visitations every since Butler's regime. The Cuban campaign must be short and decisive. There will be no time for acclimatization, nor is there need for it. With our modern bacteriologic and hygienic knowledge we are supplied with the means of what for all practical purposes is the equivalent of immediate adaptation. Observation of the laws of living evolved from years of patient study of tropical hygiene, the proper selection of camps and hospital sites, rigid sanitary rules, and prompt isolation of those infected, will render a repetition of the dreadful disease-mortality of the Spanish army very unlikely.

* * *

The International Leprosy Congress recently held in Berlin adopted three resolutions in regard to this disease which will proably be urged upon the attention of the various countries interested.

The Leprosy Congress.

1st. In all countries where leprosy is endemic or exists only in certain points isolation is the best means of limiting the extension of the disease.

2nd. Compulsory publication of the disease, surveillance and isolation as is carried out in Norway should be urged upon all nations whose municipal bodies have the authority and sufficient medical aid to carry into effect these measures.

3rd. It should be left to the civil authorities in conjunction with medical council to carry out the details of these precautions according to the social conditions in various countries.

Two things are recognized clearly in these conclusions of our best Leprologists; first that the disease is contagious and second the necessity of putting governmental authority behind relief measures. It is not enough to leave to leave this matter to public sentiment and resolutions of medical societies; this is what keeps smallpox alive in this country where it should be unknown, but will result as long as ignoramuses have access to magazines and newspapers to kindle prejudice which is extin-

guished only by a practical visitation of the disease such as recently occurred at Muncie, Ind., Chicago and Montreal.

* * *

Direct Bacterial Action.

Prof. von Babes of Bukarest, the famous neuro-pathologist, has recently published in the *Berliner klinische Wochenschrift* the results of his investigations on bacterial invasion of the central nervous system in the acute infectious diseases. His discoveries in this field are of far reaching importance and will be read with the greatest interest by all neurologssts. The investigations conclusively show that the bacteria of the acute infections may penetrate to the nerve cells of the cord and brain by way of the blood or lymph vessels and that certain definite changes in the protoplasm of the cell result. These changes in the cell are briefly the formation of vacuoles, the degeneration of the processes of the cell and finally the expulsion of the nucleus from the cell itself. The papers are illustrated with numerous sections showing the nerve cells teeming with bacteria and the various changes taking place in the nerve cells and processes.

The whole subject of acute infections as affecting the nervous system is being cleared up and in this way we have explained those cases of myelitis, meningitis etc., that are coincident with the acute infections. These papers are the most valuable contributions to this field of medicine in a long period. We are rapidly learning that the invasion of the tissues direct by the various pathogenic bacteria is far more extensive than we have hitherto supposed. Recently a writer in the *New York Medical Journal* cited cases in which the bacillus coli communis had unquestionably penetrated the tissues and invaded the urinary tracts. The farther bacterial investigations is followed the more clearly do we undertand the subtleties of disease, and the corollary is irrestible that prevention and cure will come with our knowledge of the cause. The writer recently saw a case of meningitis and pneumonia supervene upon the extraction of a tooth with an abcess at the root. The terms idiopathic and metastatic simply express unexplained pathologic processes which are rapidly increasing as we progress in our knowledge of bacterial and other disease factors.

How does antitoxin protect? This has been one of the most fascinating fields ever opened to experimental medicine and the researches suggested by it are bringing to light many wonderful facts respecting properties of blood serum and tissue cells. Wasserman and Takaki of the

Berlin Institute have published valuable results in this line of investigations. It has been found that the brain especially and the cord to a lesser degree posses a substance which neutralizes tetanus poison and that this is found in no other organs. The thymus gland also possesses a substance which is protective against certain poisons and this protective power is probably of great value in the economy. It is not improbable that other organs will show the presence of substances protective against the infections which attack them. This discovery was made by observing that when susceptible animals were given a fatal dose of tetanus culture, the effects were completely neutralized by injecting an emulsion of the dried and powdered brain or cord.

The opinion to which Behring has adhered from the beginning that antitoxin acts directly upon the poison in blood serum, rendering it inert, appears to be confirmed. Certain poisons with their antitoxins show this reaction in the blood in test tube experiment, and by the application of heat to which antitoxin is very susceptible the reaction is destroyed, the antitoxin rendered inert and the poison recovering its virulence. It therefore is probable that the specific poisons and their antitoxins are in loose chemical combination in the serum and that the prophylactic action is not through the tissues cells but direct. The origin of this protective substance known as antitoxin is thought by Wasserman to be in certain special tissues – various tissues producing it according to their election by certain diseases.

* * *

"Original Communications."

Under this heading is published in the *Medical Press and Circular*, May 4, 1898, an article on Massage of the Abdomen by our confrère Dr. Boardman Reed, which "originally" appeared in the January number of the INTERNATIONAL, although no mention of this fact is made by our London contemporary. We trust that we may be pardoned if we indulge in a quiet laugh when next we read in the *Press and Circular* the periodic sermon on American medical ethics.

We are charitable enough to attribute this oversight to the mental perturbation of the editorial staff of the *Press and Circular* over the letter on page 475, in which their correspondent quotes as of likely interest to their readers a passionate editorial of Don Decio Carlan in *El Siglo Medico*. Don Carlan pays his respect to our beloved country as follows:–

"Under very sad circumstances we to-day take the pen to write to our readers. The war in Cuba, which for the past three years, has consumed the best of our manhood and exhausted our resources, fostered by a people who have neither a conscience nor a history, by wiles they brought about negotiations, which they hoped to turn to their advantage, have at last decided to end, and by a skillfully hidden deceit we have been entrapped into a war with one of the richest powers in the world."

BOOK-REVIEWS.

AMBROISE PARE AND HIS TIMES, (1510–1590.) By Stephen Paget. G. P. Putnam's Sons, New York and London. 1897.

In his preface Mr. Paget says that Pare's life was so full of good works, adventure and romance that it ought to be known and honored in other countries besides France. Seldom do we hear his name mentioned except as the inventor of ligature of arteries after amputation—an inestimable boon to suffering humanity in preanesthetic days, when besides the pain of the knife and saw the victim was tortured with boiling oil or the hot iron to check post-operative hemorrhage.

Ambroise Pare was not only a prolific writer and a past master of surgery, but also attained a degree of renown enjoyed but by few of his coutemporaries, medical, military, literary, or otherwise. He was surgeon to four Kings not counting the King of Navarre. He was still holding his position as premier surgeon and councillor to Henry III, in 1587, three years before he died. Save art and poitics, the voluminous works of Pare contain every possible subject: anatomy and physiology, medicine, pathology, pharmacy, natural history, demonology, and even primitive teratology. The breadth, insight, force and humanity of his writings, their shrewd humor, his infinite care for trifling details, and his calm, dispassionate, and common sense methods amaze us. With all his superstitious and sometimes childish explanations, his practicality and medical insight would over-balance the skill and knowledge of many of our modern medical and surgical masters. He was not able to discourse in Latin but his solid knowledge and natural skill soon placed him far ahead of more scholastic confreres.

Mr. Paget who is also the biographer of John Hunter naturally finds resemblance in the life and writings of Pare to those of the great Scotchman who lived two centuries later. Mr. Paget has arranged Pare's letters and JOURNEYS TO DIVERSE PLACES in their proper positions in his life-history, and makes a delightful narrative of the compilation, besides giving a critical digest of his works and the striking aspects of his life. A noteworthy addition to the text is a translation of Pare's account of the Plague.

The book is well printed and fully illustrated, but we fail to see the connection between some of the German prints of old Paris and the subject-matter of the text. We could have selected far more interesting and appropriate illustrations from our 1598 edition of Pare's works.

THE PRINCIPLES OF THEORETICAL CHEMISTEV. By Ira Remsen, Professor of Chemistry in the John's Hopkins University. Fifth Edition. Philadelphia and New York: Lea Brothers and Co. 1897.

The fact that Dr. Remsen's book has reached its fifth edition in its own language, besides being translated into German and Italian, says much for the place that it has won as a text-book. While it is fully up with the latest works upon the subject, the author has resisted the temptation to increase its scope beyond his original plan of presenting a work which should be a foundation for the student in his study of the constitution of chemical compounds. To the follower of scientific medicine as well, the section upon organic chemistry should be of value as a supplement to the teaching of the medical school.

Dr. Remsen's reputation as a scientist and a teacher speaks for the value of the subject matter and the scheme of its presentation to the reader. The plan of the work has not been materially changed from its original form.

The publishers' work has been well done, with the exception possibly that the paper is not of the finest.

ORTHOPEDIC SURGERY. By James E. Moore, M. D. Professor of Orthopedic and Clinical Surgery in the College of Medicine of the University of Minnesota. Fellow of the American Surgical Association. Member of the American Orthopedic Association, etc., etc., Philadelphia, W. B. Saunders. 1898.

Although Orthpedic Surgery may still be included among the younger specialties, it has in recent years made such rapid advances, to which the surgical and and mechanical ingenuity of American orthopedists have contributed much, that the appearance of new books on the subject from time to time need excite but little surprise. The volume which Dr. Moore has given us, although less encyclopedic than some of its predecessors and more especially intended as a text-book for the student and a book of reference for the general practitioner, is an excellent compendium of the best teaching of to-day. The key-note of success in this branch of surgery is struck when the author states in his introductory chapter, that the best results can only be attained when the orthopedist is equally skillful and ready in both the mechanical and operative branches of this art.

It is by this combination alone, that a wise conservatism can be reached; a conservatism, which will be equally prepared for a time-saving tenotomy in a case of club-foot, or the application of mechanical measures to a diseased joint which will avoid the necessity of a multilating or dangerous operation. The limitations in size of the volume forbid extensive discussion of treatment; it is here that the author is at his best, the subjects being handled carefully and judiciously, and many helpful little hints being added from the author's own experience. The chapters on Pott's Disease, Club Foot, and Hip-joint Disease, strike us as being especially good. There is however no reference made to Calot's brilliant operation for the forcible correction of deformities from Pott's Disease, a grave omission in a book in which the date of publication is given as 1898. We are glad to see a recommendation of Gibney's treatment of sprained ankle by strapping, a mode of treatment incomparably superior to the older methods in the large majority of cases.

Since epiphysitis has been assigned a place, we would like to have seen more space given to its diagnosis and treatment, and the same might be said of gonorrheal and syphilitis arthritis. This book is well printed and proof errors are few and unimportant, although the name of the Vienna orthopedist, Lorenz, is spelled Lorenze throughout. The illustrations are excellent, well chosen and many of them original, and the book takes its place among the best text-books on this subject.

A MANUAL OF OBSTETRICS By A. F. A. King, A. M., M. D. Seventh edition. In one 12 mo. vol. of 536 pages, with 221 illustrations. Cloth, $2.50

Any one familiar with the 556 pages of closely printed matter contained in this little book has no difficulty in accounting for the popularity that has created the demand for the seventh edition. Issued originally in 1882 as a manual for students it has grown to such proportions that it now stands unrivaled in the field for which it was intended and is superior to many of the more pretentious works on the subject. It is clear, concise and practical, its therapy is the most modern and it is up to date in every particular. The illustrations are well selected, the letter press can not be found fault with and and there is none of the objectionable padding so often used to make the size and cost of a book entirely incommensurate with the material contained in it. It is by all odds the best American Manual of Obstetrics that we have seen.

TREATISE ON THE DISEASES OF WOMEN FOR THE USE OF STUDENTS AND PRACTITIONERS. By Alexander J. C. Skene M.D., L.L.D., Professor of Gynecology in the Long Island College Hospital, Brooklyn, N. Y., etc. Third Edition, revised and enlarged with 290 engravings and 4 plates in colors. New York, D. Appleton and Company, 1898.

Advances and changes in the practice of Gynecology have been so rapid that within two years the third edition of this work has become necessary. The second edition was published six years ago. The present volume is enlarged and contains many new illustrations which are very clear and add much to the volume of the text.

The chapters are rearranged especially those upon the bladder, and several new ones added as well as some few omitted. The chapter on pelvic cellulitis is practically unchanged, but in the chapter on injuries of the pelvic floor there has been a rearrangement of the varieties and some change in the surgical treatment. In the treatment of uterine displacements special attention is given to the use of the pessary which is considered the best method of treatment in many cases. Ventral fixation is preferred to ventro-suspension as a name, although the operation described is only a suspension in abdominal hysterectomy. Kelly's method of continuous incision is recomended although the method of Baer is also described. In vaginal hysterectomy a modified Landau operation is described but the author here recommends the use of his method without ligatures by the use of the electric Hemostatic forceps.

He now uses this method of controlling hemorrhage in all surgical operations and claims as its advantages that it is certain and reliable, that all lymphatics are sealed up at the same time and thus septic absorption is prevented, that there is less pain because the nerves that accompany the vessels are immediatly and completely devitalized, that the operation is perfectly aseptic because the heat employed sterilizes, the parts involved and finally it leaves the stump in a condition requiring the least reparatory care so that recovery is more prompt and uneventful.

The necessary instruments, which he has lately perfected, are carefully described. The chapters on the bladder and urethra are of especial value. In the examination of the bladder the method by vaginal palpation is highly praised but we are surprised to find that digital examination through a dilated urethra is still sanctioned in some cases. The straight cystoscope is preferred over Kelly's method, which is but briefly mentioned. Of catherization of the urethers the author says, " the newer method of doing so with the aid of the cystoscope is easier for some of us, but it is difficult, not without danger, and of little practical value."

We need hardly say that the illustrations, which have been in charge of Dr. R. L. Dickinson, are excellent. This book as a whole is convenient, well printed and practical.

THE INTERNATIONAL MEDICAL ANNUAL, and Practitioners Index. Sixteenth Year. 1898. Publishers, E. B. Treat & Co. New York, Price $3.00

Sixteenth annual issues speaks well for the International Medical Annual, and according to the preface the circulation of the last volume exceeded that of any other year. Among the contributors are many of the best known medical men in the English speaking world, and the truly international scope of the volume is indicated by the equitable distribution of the work among British aud American authors. A graceful tribute is paid to Professor Theophilus Parvin whose final contribution to medical literature appears in these pages.

The plan of the work remains the same, although it has been enlarged and better illustrated. Part I on Therapeutics includes a dictionary of new remedies and a review of therapeutic progress for 1897, by Dr. William Murrel of London. Part II consists of the innovations in treatment arranged alphabetically according to the diseases, Appended to Part II is a valuable atlas of the bacteria pathogenic in the human subject by Samuel G. Shattock, F. R. C. S. Part II includes recent legal decisions of medical interest, sanitary science, concealed alcohol in drugs, new instruments and appliances, and a very complete index.

THE DISEASES OF WOMEN. A Hand-book for Students and Practitioners. By J. Bland Sutton, F. R. C. S., England, and Arthus E. Giler, M. D., Bsc. London, F. R. C. S. Edinburgh. Published by W. B. Saunders, Philadelphia.

One is disappointed in reading this book to find that it does not fulfil the expectations which the names of its authors would seem to justify; Primarily written for students and as a guide for practitioner who are not specialists in Gynecology, it doubtless expresses the views of these well known teachers; Undue prominence is given to many points in pelvic examination for so small a volume. For example a page and a half is devoted to a picture and description of the uterine sound, an instrument which is now rapidly falling into disuse. The Ferguson speculum, which on this side of the water has been banished from the office and dispensary, is illustrated and described at length. The author advocates Tait's method for the repair of lacerations of the perineum, an operation which has been abandoned in this country.

Too little importance is attached to lacerations of the cervix and the opinion is expressed that "a lacerated cervix does not, as such, give rise to symptoms, except occasionally bleeding in recent cases."

The chapters dealing with diseases of the ovaries, tubes and uterus are well written and the teaching clear and concise, so also the consideration of abdominal operations and technique. The illustrations are good and the general style of the book excellent.

THE YEAR-BOOK OF TREATMENT FOR 1898. A Critical Review for Practitioners of Medicine and Surgery. Crown octavoo, 488 pages. Cloth, $1.50. Philadelphia and New York. Lea Brothers & Co., 1898.

The fourteenth annual volume of this valuable epitome of the year's progress in all branches of practical medicine is before us, and presents the same noteworthy features as it predecessors. The only change in the staff of contributors are that Dr. G. A. Gibson, Lecturer in the Edinburgh School of Medicine, has supplied a review of the advances in the treatment of Diseases of the Heart and Circulation; and Dr. Herbert P. Hawkins, Physician to St. Thomas's Hospital, London, has dealt with Diseases of the Stomach, Intestines, and Liver.

At its very modest price no physician, either general or special, can afford to be with this very readable and highly practical annual.

MEDICAL NEWS AND MISCELLANY.

Sir William Turner. professor of anatomy at the University of Edinburgh, and recently elected President of the General Medical Council, has also been elected corresponding member of the Berlin Academy of Science.

Qualifications to Practice in the Yukon.—Physicians desirous of legally practing in the Klonkike region may do so (1) if they hold British qualification and pay a registration fee of $50; (2) not having such qualifications, they must pass an examination and pay the same fee, Dr. H. N. Bain, Prince Albert, N. W. T., is the registrar of the territories. The authorities are insisting on the strict carrying out of these regulations.—"The Canadian Medical Review."

A Medical Patriot.—Maine's oldest volunteer to fight Spain is ex-Governor Garcelon, of Lewisburg, aged eighty-six. He has served his country through one war, and he was then, thirty-seven years ago, over the exempted age.

Application from Physicians.—The Surgeon-General of the army has received several thousand applications from physicians throughout the country desirous of serving in the regular and volunteer during hostilities. Many of these requests come from prominent physicians and surgeons, willing to relinquish lucrative practices in order to serve their country. The Medical Department has practically decided to limit, as far as possible, commissions of acting assistants surgeons to those physicians who are immune to yellow fever. The vacancies for surgeons to the regular army will be filed as usual through the Army Examining Board, while medical officers for the volunteer army will be commissioned by the Governors. The Surgeon-General announces that no female nurses will be sent to Cuba or to hospitals upon the Gulf coast.

Loss of an Eye in a Students' Duel.—A report from Tübingen announces that in a students' Mensur (the German name for students' duel), one of the duelists was struck just above the eye with the dueling-schläger (rapier), and though the eyes are protected during the duels by heavy goggles, the momentum of the blow was such that the eye was forced from its socket. There will be the usual protest against the barbarous custom, but it will have no practical effect. Dueling is forbiden by law, but is winked at by the city and university authorities, and will be so

long as the Kaiser is known to hold his present views in the matter. He thinks it good exercise for the development of martial courage, and he belonged to a duelleng society himself when young. The practice will therefore continue to be in Germany, as it has been in the past, the surest sign of a liberal education to have some ugly scars on the cheek and head.—" Philadelphia Medical Journal."

Bone-Setting in Rural England.—A writer in a contemporary English weekly records the following amusing account of how bone-setting is practised in the country districts of parts of England: "An old women I once knew had a kind of shibboleth which she repeated in all cases of injury of the elbow. ' There are two small bones at the elbow.' was her remark. Now, there are not two small bones at the elbow, as every ambulance student knows. Still the old lady held on her way rejoicing. I have even heard it seriously asserted that this old lady had ' mended a man's broken neck ' when the surgeons had given him up as a hopless case. A capital story of bone-setting is that of a Scotch laddie, Jock by name, who, after being carried by his mother an unwilling patient to the bone man to get his leg set, was asked if the manipulation had hurt him. ' No ' said Jock; ' it dinna hurt me.' ' I told you it wadna be painful,' said his mother. ' Ah,' replied Jock, ' næ wonder! Ye see, mither, I just let him fumble wi' tha sound leg.' "—" Medical Record,"

London's Epidemic of Measles and the Circus.—It is said that the Barnum and Bailey Circus, by bringing together a large number of children, has done much toward spreading the epidemic of measles which has prevailed in London for some months. The death-rate of this disease in that city for the week ending January 1, 1898, was ninety-one. This figure has not been reached since, although as yet there is no evidence of any very material decline in the epidemic.—" Medical Mews."

A Blow at " Face Specialists."—According to the *Medical News*, a bill has been introduced in the New York Assembly to put a stop to the work of unprincipled persons who make business of removing facial blemishes and making dimples. The bill provides that such work may not be done by any but practising physicians. A fine of $250 and imprisonment for six months will be the penalty for the first offence, a fine of $500, and a year's imprisonment for a subsequent conviction.

A Grandmother at Twenty-six Years.—The following is a copy of a letter addressed to the Editor of the Philadelphia *Polyclinic*:

KINGSTON, N. C., May 1, 1897.

Elisabeth S., a native of Wayne County, N. C., bore an illegitimate daughter daughter in May and reached her thirteenth birthday the following June. The daughter, Ann menstruated at eleven years, was mar-

ried at twelve, and bore a son in April, becoming thirteen years old in May. The labor was tedious and difficult. Ann grew four inches taller after bearing this child, and has borne seven children since. She is in fair health and does not show any signs of premature age.
Who can beat this record?

H. O. Hyatt, M. D,

Medical Education in the United States.—The last Report of the United States Bureau of Education (1895-1896) contains much valuable information relative to the medical schools in the United States The number of schools included in the statistics is 155 ; of these 9 are graduate schools, 2 are physio-medical, 20 are homeopathetic, 8 are electric, and 116 are regular. The total number of medical students at the period to which the report refers was 24,437, of whom 4,947, or 22 per cent., graduated during the year. The regular schools of medicine enrolled 19,999 students, and graduated 4,261. The endowments of the medical have risen to $542,820—$419,150 for regular and $120,000 for homeopathic schools; while the value of building, grounds, and equipment is $9,520,995—$7,483,795 for regular colleges, $1,625,200 for homeopathic colleges. The report shows a great increase in the number of volumes in the libraries of the medical colleges. The regular colleges report 94,912 bound volumes in the libraries of forty-seven colleges. One library—that of the Medical School of the University of Michigan—reports 10,000 volumes. The homeopathic colleges report 41,350 volumes in their libraries.

British Medical Students,—Last year the medical students registered in England, Scotland and Ireland numbered 1542.

An Actress the Victim of "Obesity Cures."—It is reported that the sudden death of Margaret Mathes on the stage of a theatre in Charleston, S. C., was due to the excessive use of obesity cures. Members of the company say that Miss Mather was in the habit of taking large quantities of tablets, mixtures and mineral waters to reduce her flesh. She had been warned by her physician that these drugs might have a fatal effect at any time, but she paid no attention to this advice.

Training the Sight.—It is the opinion of Brudenell Carter, the eminent English surgeon, that the average acuteness of human eyesight can be greatly improved by systematic training. In a paper read before the London Society of Arts on February 23, he urged parents and teachers not to regard sight "as a power or faculty which may be trusted to take care of itself," but to train it systematically by the aid of appropriate objects, and to test its quality from time to time, as is now done in the case of railway employees. In commenting on this address "The Hospital," London, March 5, says :

"Travelers have told marvelous stories about the sight of many savage tribes, and, although some of these stories may be received with incredulity, while others are explicable by the greater clearness of the atmosphere in the countries where they occurred, yet there seems no sufficient ground for doubting that the visual function, like every other, is capable of being improved by judicious exercise, and especially by such exercise as is afforded by the necessity of reliance upon its faintest indications. There is no reasonable doubt that the Siberian Tartar, who when looking at Jupiter, told Arago that he had seen the big star swallow a little one and spit it out again, had really seen, with his unaided eyes, an occultation of the third satellite. Sir H. Truman Wood, in the discussion at the Society of Arts, spoke of an Englishman who could see some of the double stars ; but it must be remembered that the Englishman could easily know what stars were double, and could, perhaps, fancy that he saw their peculiarity ; while the Tartar could have had no knowledge of the very existence of the satellite if he had not seen it. Mr. Carter maintained that the habit of seeing as much as possible, of earnest visual attention to the details of the environments, would certainly have the effect of increasing the activity of the visual function, and also in all probability of promoting the growth of finer fibres in the retina, by the aid of which smaller images could be appreciated. He gave reasons for believing that the vision of town-bred children is less acute than that of the country-bred ; the former seeing chiefly large objects, such as houses and omnibuses, under large visual angles ; the latter habitually attending to smaller or more distant objects, and using the eyes under smaller visual angles. The general moral of the discourse was that all school teachers should be instructed to test the vision of new pupils, and to record the facts in a register, at the same time calling the attention of parents to the cases of manifest defect, and thus enabling them to obtain timely advice, or to regulate the course of education with reference to the special requirements of each child. It was further suggested that vision could be trained in schools by the use of difficult test-objects set at proper distances ; it being only work upon near objects that is ever injurious to the eyes, while work upon distant objects must always be of the kind by which the faculty exercised is likely also to be improved. It was maintained that sight might even be permitted to take its place among the physical qualities that are made the bases of competitions, and that prizes might be awarded for excellence. It seems certain that there are positions in life in which the power to see actually might be quite as valuable as, or even more valuable than, the power to run swiftly ; and there seems no valid reason why the recognition which is daily given to the latter should not be extended also to the former."

The Accident Neuroses of War.—As we face the present situation of affairs with regard to a possible war with Spain, it is of intrest to consider what some of the outcomes of such a conflict would be from a purely medical point of view. If the crisis which seems im-

minent should result in actual hostilities, it is evident that we shall be brought face to face with conditions for which we have no adequate precedent. The warfare will be carried on chiefly at sea by means of engines of destruction of whose capacity we have little knowledge. It is certainly not our purpose to discuss the efficiency of the modern war-vessel in actual service, but rather to speculate, with what knowledge we have, in the first place, as to the destruction of human life, and in the second place, as to the more or less permanent injuries which the participants are likely to carry away from a conflict.

The experience narrated to us in the late Chinese-Japanese War is still more or less vividly before our minds ; and from this one engagement—the battle of Yalu— we may form some conception of the physical and mental effects of a naval battle. Should the navies of the United States and Spain actually clash, we cannot but suppose that the results would be infinitely more disastrous than in the now famous battle of the Yalu. In that engagement, apart from the actual loss of life which must necessarily always occur, there were several subordinate injuries which excited the general interest of the medical world. Notable among these were the effects of concussion upon men confined in limited spaces —deafness, for example, and more or less serious injuries to the hearing apparatus of various sorts. In the unfortunate death and antecedent illness of the officer to whom we owe our best descriptions of the fight, we have exemplified a class of injuries which we must regard in great measure as dependent upon modern methods of naval warfare.

It is to this latter series of possible conditions to which we desire to draw particular attention, and to the effects upon the nervous system in general. In these latter years when trauma has come to play so important a part in the etiology of certain nervous affections, we have often heard the query as to the effect of a great battle upon the nervous systems of the surviving combatants. So far as we are aware, no really satisfactory answer has been given to this query ; for the reason, no doubt, that no observations have ever been made. Even at the battle of the Yalu no valuable statistical report as to the later effects of actual injury, or so-called nervous shock, have been reported.

We are all painfully conscious of the fact that a gas explosion or an accidental railway accident leads to consequences which seem to have no end. Neuroses of the most varied sort are forthwith born and grow to quite hopeless proportions as the years go by. Are we to suppose that men cooped up in extremely small spaces, stormed at from without by projectiles of enormous force, and subjected to terrific concussions of their own armament, should not suffer a like nervous derangement ? The potential active life of men serving on torpedo boats or torpedo-boat destroyers is said to be a very short one—a maximum of three or four years. It is hard to conceive a position of greater nervous tension associated also with an element of extreme danger to life.

The question is really one of very vital interest in the present state of our endless discussions as to the real nature of these now so common

nerve disorders ; and yet whatever the outcome, as regards the nervous systems of the combatants, we should do well to be cautious in drawing conclusions. In the first place, it is clearly evident that the element of surprise, of suddenness, of unexpectedness, is almost entirely lacking in the case of the sailor, whose whole training has in a measure fitted him for the ordeal of an actual engagement. He enters the fight consciously and with every possible preparation for the horrors which may be in store for him. He is, to a certain extent, used to the reverberation of heavy artillery; and, more important still, he has deliberately chosen his lot. To the victim of the railway disaster, on the other hand, there is no possibility of preparation ; he is plunged from a state of peaceful security into a chaos of emotions which he cannot at once understand and whose possible outcome is quite beyond his knowledge. This difference must be of the most extreme importance in its effects upon the nervous system, but exactly how important only a careful statistic, not yet forthcoming, can tell.

Another element in our supposed problem is one in which the two classes of cases may stand on a more common footing. We are forever hearing that the prospect for damages is the vital stimulus which brings on the nervous disorders of the railway victim. Under this theory, we must hold that we have become so innately mercenary that the thought of a pecuniary remuneration takes precedence of all others, at the very moment of the accident. It is at least conceivable—and we say it without the slightest disparagement to the members of the navy—that a like thought may have a certain weight in determining the outcome of accidents in war. We learn that the pension list is growing larger rather than smaller ; and may it not be that this subtle influence may come in as never before to determine, in a measure at least, the outcome of traumatic nervous affections originating in time of battle ? It should be remembered, however, in the case of the marine, that there is the strongest stimulus so long as a war lasts, to a speedy return to health, in order that his gallantry may be rewarded by a promotion to a higher grade of the service.

In the light of he recent disaster to the "Maine," and from the knowledge we are every day gaining of the enormously destructive effects of the torpedo and submarine mine, it is evident that modern naval warfare is assuming more and more the character of the unexpected. We may, therefore, expect to see in this regard, a continually closer analogy between the accidents of war and those of peace, a consideration which will make future war statistics of greater value in the study of the neuropsychoses.

From all this it must appear that while certain analogies are apparent between the traumata of private life and the traumata of war, nevertheless, deductions based on such analogies should be carefully regulated by a study of the essential differences, so far as they exist, between the two cases. As we too well know, the whole matter of the traumatic affections of the nervous system is as subtle as any problem with which

we have to deal in the whole realm of medicine. Suggestions, however, are always legitimate, and these remarks are only offered as such. In the unfortunate event of war, it is surely to be hoped that this compensation may at least be gained, that we may learn something more definite as to the immediate and remote effects of the nerve strain induced by a modern naval conflict.—" Boston Medical and Surgical Journal."

Version Extraordinary by Ramsbotham.—The "Reminiscences" of the venerable Dr. Robert Barnes, of London, as given by him in current issues of the " Scalpel," afford us the following anecdote : " My recollections of the London Hospital are pleasant. I was elected assistant obstetric physician in 1859, and so had at first to serve under Dr. Ramsbotham. We worked very well together, but he continued to hold office longer than was expected. I may relate one instance, illustrating the anomalous position in which the obstetric physicians were held. A case of gestation, demanding delivery by Cæsarian section, occurred. Obviously this was an obstetric case, but, under the surgical law, delivery requiring the knife was within the right or duty of the surgeon. Ramsbotham and I had to look on while the surgeon operated. The surgeon laid open the abdomen, laid bare the gravid uterus, made an ample incision in it. The fetus came into view, its long axis corresponding to the long axis of the uterus. He seized an arm, dragged it, expecting to lift the fetus easily out of the uterus. He was foiled, but tugged at it till uterus and fetus came through the abdominal wound. At this crisis Ramsbotham had to intervene and do the obstetric work. He put the arm back, by a delicate maneuver, seized a foot, and holding this with one hand, whilst he applied counter-pressure with the other hand upon the head and upper part of the trunk, he turned, and extracted the child with the greatest neatness and ease. A more beautiful and artistic demonstration of the problem of turning than this completely visible performance it is impossible to imagine. One thing it proved was that the surgeon was not qualified to practice obstetrics,"—"Journal of the American Medical Association."

The Hindu's Dread of Existence.—" The holiest place in all Bombay," says Lucy E. Guinness, " is the ' tank.' It is to the natives a sanctuary, and around it little temples rise, to it pilgrims go, near it numbers of fakirs sit, covered with filth and ashes in the hot sun." According to the " Literary Digest," Miss Guinness, who is the editor of a London paper, " Regions Beyond," writes in " The Missionary Review " (New York, April), and after a brief description of the appearance of these fakirs, " looking almost more like beasts than men," she indulges in the following reflections awakened by the scene :

" What must be the character of the faith whose ideal is before us ? We stand bewildered in the sunshine, trying to realize that it is not a dream—that to these men, our brothers, this filth, this degradation, this naked idleness, is the embodiment of sanctity—and our hearts go out

to India, the first example of whose greatest faith meets us in such a form. This is Hinduism, hoary Hinduism, three thousand years old, and ruling to-day more than two hundred million men and women. The spectacle before us is the outcome of her teachings. This is the highest life one can lead. To their minds existence is an evil ; emancipation from it in this life, and in countless future ages, is the one hope. Detach yourself from earth, go without clothes ; have no home, no friends, no people ; do no work ; take no interest in anything at all ; enjoy nothing, fee' nothing, hope for nothing. Detach yourself—to do this, suffer pain, sleep on spikes, starve yourself, or eat carrion and nameless abominations ; hold your arms up till they wither and the nails grow through the hand ; do anything and everything to get rid of your supreme curse conscious existence.....

" This nightmare dread of existence is the natural outcome of the transmigration theory—that saddest and most hopeless of all human explanations of life. Think for one moment of what it would mean to you to believe that every living thing on the face of the earth was the body of some soul—birds, beasts, insects, reptiles, men—all alike, soul-houses ; and that human souls were ceaselessly shifting through countless lives, and must forever shift among these, according to their merits or demerits ? Transmigration we call it, and dismiss the idea with a word. But to believe that idea, to think that the souls you love best, and that death has called away, are pent up in some body—a jackal's, a cow's, a serpent's, perhaps—and will be found there, feeling, suffering, enjoying if they can, until death smites them once again, and once again they change their house and pass into some other form, as coolies, kings, or what not—to believe that idea, what must it mean ? Think of the burden of it, the endless, restless, weary round, from which is no escape ; the grip of fate that holds you and drives you on and on ; the inexorable sentence, from which is no appeal, consigning you to groveling reptile life or loathsome being. You may be born to-morrow a leper, an idiot, a murderer, anything—Karma, your fate determines what shall be, and your fate depends entirely on your merits. There is no pity anywhere, there is no forgiveness. Trouble comes to you to-day ? Ah, you earned it yesterday, back in your last body. Then you sinned, now you are punished. This theory apparently explains everything so satisfactorily —all the crookedness and inequalities of life, all the strange chance of destiny. But it is so hard, so hopeless. Eighty-six million times you will be born and reborn, to suffer, live, and die.

" What more natural than to wish to shorten the period ? Become a devotee, perhaps even a fakir. By so doing you detach yourself. You gradually escape reincarnation. You stand a faint and far-off chance of sooner finding rest—the oblivion of Nirvana—' not to be.' "

Accountability of the Physician.—The law does not require of a physician or surgeon absolute accuracy, either in his practice or his judgment. The law does not hold physicians and surgeons to the

standard of infallibility, nor does it require of them the utmost degree of care or skill of which the human mind is capable, but that, while in the practice of their vocation, they shall exercise that degree of knowledge and skill ordinarily possessed by members of their profession. This is the declaration made by the Supreme Court of Nebraska, in the case of Van Skike vs. Potter, December, 1897, which was an action brought to recover damages from Drs. Potter and Reynolds for alleged negligent treatment of knee-cap fracture. The trial resulted in a verdict and judgment in favor of the doctors, which the Supreme Court affirms. The evidence, the Supreme Court holds, sustained the finding of the jury that the defendants did not contract with the plaintiff to effect for him a permanent cure, and did not contract to visit and treat him until he was cured. As to whether they had pursued the proper method in setting his knee-cap by wiring the fractured portions together, the Supreme Court says : "As is usual, the experts for the plaintiff agreed with his contention, and the experts on behalf of the defendants agreed with their contention"; and it decides that they were not guilty of negligence in the treatment given the plaintiff, including the leaving the point of a drill in the bone, when broken off in drilling a hole in one of the pieces of the kneecap, owing to a movement of the plaintiff's leg. Upon the issue made by the pleadings as to whether the defendants agreed to visit and treat the plaintiff until he recovered, the court holds that they were properly permitted to testify that at the date of their last visit to him they informed him that they should not return unless they should be requested so to do. It also holds that in such a case text-books on surgery, though standard authority on the subject, could not be read to the jury as independent evidence of the opinions and theories therein expressed or advocated.—"Journal of the American Medical Association."

Increase of Baldness.—Those who frequent public meetings must have had their attention drawn to the increasing number of bald pates among the audience on the benches during the last twenty years. Previously to this period one observed a large proportion of gray or white-haired heads in congregations or meetings, but these seem somehow to have disappeared, and the bald pates have gradually taken their place. It is to be hoped that this is not a sign of the bare head becoming hereditary in the youth and manhood of the age, and that wigs will not again come into vogue as in the olden times. This precocious decay of the hair at the present day may be due to the prevailing fashion of short cropping the head in boys and adults, since baldness is comparatively rare in women, whose hair is not cropped short even as girls. The explanation of this decay, which seems to be irremediable in maturing age, is probably due to the young hairs being deprived of the shelter and warmth necessary to their young vitality, and they consequently suffer from exposure. Only the stronger hairs can survive this exposure to the weather, and even this is becoming stunted in growth owing to its

being frequently cropped short. A like process goes on in meadow and cornfields, where the coarser stubble and straw and grass allow the growth among them of fine grass, weeds and flowers, which would perish if left without any such shelter. A correspondent observes that on visiting the old society rooms in a large provincial city, he had occasion to look over a large collection of portraits and groups of past members, and he could not but notice the finer heads of hair in the older ones, and the gradual appearance of short cropped hair and bald pates in increasing numbers among the later members. We generally associate bald heads with the legal profession, where their prevalence has been ascribed to the custom of wearing wigs, thus necessitating the hair being cut short to allow of the adornment. Its appearance in the medical profession seems to be of recent advent, and it probably will, in due time, lead to doctors wearing wigs like their medieval ancestors. It is possible that deterioration of, or risk to, health may result from shortness of hair or complete baldness, by the exposed scalp being deprived of its natural covering and armor, shielding it against cold draughts and vitiated air laden with microbes. These facts suggest the desirability of making inquiry whether such individuals are not more liable to diseases of the influenza type than persons possessed of a good substantial head of hair. Doubtless, some share in the capillary denudation must be accorded to the use of hard-rimmed hats, which interfere with the circulation in the scalp and starve the hairs of nourishment, but this cannot be the only or even the most important factor.

The Medical Experience of Benvenuto Cellini. — The current issue of the "Quarterly Medical Journal," published at Sheffield contains a paper by Mr. D'Arcy Power, F.S.A., on the Medical Experiences of Benvenuto Cellini, the great Italian art metal worker of the Renaissance. Cellini was born at Florence in 1500 and died in 1571. His autobiography gives an excellent account of contemporary medical practice, for Cellini was both a libertine and a bravo. Attempts were twice made to poison him, once with powdered diamond, and once, Cellini thinks, with corrosive sublimate, a supposition with which Mr. Power disagrees, thinking that arsenic was administered. Cellini's narrative shows that plague, malarial fever, and syphilis were the great epidemic diseases of the time, and that in due course he suffered from each. He had but a slight attack of the plague during the great Italian outbreak of 1522-23, but it left him with a bubo, which was treated by plugging with lint. His attacks of ague were numerous and severe, and he was treated by Francesco da Norcia, the greatest physician of the time. Syphilis he acquired during the comparatively mild period which followed the malignant outbreak by which it signalized its first appearance in Europe. He describes the source of his infection, and though he does not mention the primary sore, Mr. Power is able to show that he had iritis and a tertiary syphilide. He declined to be treated with mercury, and preferred to dose himself with guaiac. Mr. Power held that

the lax sexual morality of the time is shown by the apparent fact that no moral turpitude whatever attached itself to syphilis in its early epidemics, and Cellini says, with perhaps a touch of malignity, "In Rome this kind of illness is very partial to the priests, and especially to the richest of them." On one occasion a piece of steel accidentally lodged itself in Cellini's eye, which was removed by a remarkable piece of folk medicine. At another time he broke his leg in escaping from the prison of Sant' Angelo in Rome, an escape which was considered marvelous, though, as Cellini says, the Pope did the same thing when, as a young man, he was imprisoned there for forgery. Cellini was soon recaptured, and was committed to the rigorous confinement of a dungeon swimming with water and full of big spiders and many venomous worms. A wretched mattress of coarse hemp was flung to him, which in less than three days soaked up water like a sponge. Here he remained for four months, yet at the end of this time his broken leg was as sound as a roach. The second imprisonment was a terrible one, for Cellini was at the mercy of a Castellan who was so mad that at one time he fancied himself a bat, at another time a frog, and at another time an oil jar. The Pope, according to Cellini's version of the matter, handed him over to the Castellan to be put to death in any way he liked. Fortunately for art, his gaoler took compassion upon him, and in a lucid moment took measures to set him free. But during his imprisonment Cellini's reason almost gave way, for he tried to commit suicide ; he saw visions and he heard voices. In estimating the historical value of Cellini's statements, it must be remembered that he was, on his own showing, one of the greatest scoundrels that ever lived ; and he added to his other gifts and graces a very pretty talent for lying.—"British Medical Journal."

Leprosy in North America.—In a clinical lecture on a case of leprosy, recently delivered in John Hopkins Hospital, Baltimore, Professor Osler referred to sensational reports that had appeared in the American press as to the spread of leprosy in the United States As the result of inquiries that he had instituted he stated that, including the two infected districts in the Dominion of Canada, there are five foci in which the disease at present prevails in North America. In the northern part of New Brunswick leprosy has existed in a couple of counties since the early part of the century. The cases as recognized are segregated in the lazarette at Tracadie. Dr. Smith, the physician in charge, writes, under date of January 17, 1898 : "The number at present in the hospital is 24, 18 males and 6 females.....Of the above number 3 are Icelanders whom I brought from Manitoba. Leprosy in Cape Breton has almost died out. With us in New Brunswick segregation is stamping out the disease. The cases have dwindled from about 40 in the early history of the disease to about half that number. One of our inmates is a negro I brought recently from St. John, N. B. He had strayed from Bermuda. Leprosy is not on the increase in Canada."

In British Columbia the disease has been introduced by the Chinese but there are only eight cases at present in the settlement on Darcy Island, and Dr. Hannington, of Victoria, does not think that the disease is spreading. Among the Icelandic immigrants in Manitoba there are a few cases, but the strong probability is that the disease will gradually die out. In the United States there are three important centres. To "New Scandinavia," as parts of Minnesota and Wisconsin have been called, the disease was introduced by immigrant Swedes and Norwegians. Altogether more than 150 cases are known. The disease has not spread, and Dr. Bracken, the Secretary of the State Board of Health, wrote January 19, 1898, "There are in Minnesota, so far as is known, only 27 cases, and some of these have probably died since the last return. All of them contracted the disease before coming to America." No instance of leprosy has been known to be contracted from any of these Norwegian settlers. In California leprosy has been introduced by the Chinese, and, in a few instances, by native Americans returning with the disease from the Sandwich Islands. The total number of cases, however, is not large, certainly not more than a dozen, and the likelihood of the disease progressing in the native American population is very slight. By far the most extensive focus of leprosy is in Louisiana. Dr. Isadore Dyer, who was the delegate from Louisiana to the Leprosy Conference in Berlin, has reported fully on the history of the disease in that State, where it has been known since 1785. In a letter dated January 12, 1898, he states that in that paper he has given full tables "of all recorded leprosy in Louisiana since 1785, the existing acknowledged cases being separately tabulated. This last table contains 118 cases, in addition to which I have seen 6 within the past four months, making a total of 124 positive living cases to-day." Dr. Dyer thinks that this does not represent by any means all the cases, but he believes it is quite justifiable to calculate the number of lepers in this State as not less than 300. A few cases are met with in Florida, South Carolina, and in others of the Southern States. Now and again cases appear in the Eastern cities, invariably imported. So far as is known, with the exception of the single case recorded by Dr. I. E. Atkinson, of Baltimore, there has not been an instance in which the disease has been transmitted from one of these imported cases to a native American. Professor Osler believes that the fear of the disease spreading in the United States is altogether fanciful."—"British Medical Journal."

Bicycle Heart.—Several well-known French cyclers have lately, it is said, beed rejected as unfit for military service by reason of hypertrophy and other diseases of the heart. A contemporary, representing no doubt lay opinion, professes astonishment at this result. But medical men will be rather surprised that the numbers are so small. There must be few of us who have not seen the ill effects of over-exertion on a bicycle. The commonest is palpitation and temporary dilatation;

but even this is sometimes very difficult to cure. In a case which occurred recently, a lady, ordered for a fortnight's change of air after influenza, chose to spend it in bicycling about fifty miles a day. As a result, she has ever since that time—now nine months ago—had a pulse which on the least exertion rises to 120, though she has not ridden again. That temporary dilatation occurs is enough to show the great strain put upon the heart, and it is an added danger that the sense of fatigue in the limbs is so slight. The rider is thus robbed of the warning to which he is accustomed to attend, and repeats or continues the strain upon the heart. As in other similar cases, the effect is to render that dilatation permanent which was at first but temporary, and to cause an increase in the muscle of the heart by repeated exertion. The heart produced is of large dimensions and of thick walls—a condition which may, perhaps, give little uneasiness to its owner, but which medical men will view with considerable distrust and apprehension. Weakly and elderly people cannot be too often told that no exercise is more easily abused, though, if taken in a sensible measure, few are more healthful or enjoyable.—" British Medical Journal."

Disease From Beans.—The latest article of diet to have its character impeached is the common bean, which Pythagoras so warmly recommended, and which is said to be the favorite food of some communities in our republic. Dr. Cipriani has just published on the subject a book which, notwithstanding his Italian name, is written in German, and of which an analysis is given in " La Nature," (Paris, February 26th). His work, we are told, is the result of no slight study and observation, and is therefore entitled to respectful attention. He accuses the bean, which has long been thought so harmless and nourishing, of causing a malady by no means infrequent to which he gives the name of fabismus. According to him, it is not the beans themselves which are poisonous but microbes which exist in the interior of the bean. In that case we have to deal with an infectious disease.

Fabismus can be contracted in two ways: through the respiratory apparatus and through the digestive apparatus. In the first case the malady appears on inhaling the emanations from bean flowers. In the other cases it is produced by swallowing the beans themselves. The emanations from the flowers received in passing a bean-field are not always poisonous, that depending upon the season and the condition of the persons who inhale them.

Fabismus appears especially when one has eaten raw beans; but even dried and cooked beans may bring on the malady. If some of the beans which have made a person ill are given to a guinea-pig, the animal also becomes ill. Of course, if the cooked beans have been exposed to a heat sufficient to kill the microbes, the danger is eliminated.

Feeble persons—the neurasthenic—especially nervous women, are more disposed than others to be poisoned by bean flowers. Most of all does the poison influence those who have disordered stomachs. A first attack predisposes to a second one.

The progress of the malady is rapid. In the case of respiratory fabismus it culminates at the end of from two to five hours in a violent chill, followed by a fever, a little headache, insomnia, and prostration. In some cases the fever is so high that the patient is obliged to go to bed. Finally —but happily very rarely—the fever brings on a comatose state, which, in twenty-four hours, ends in death. In ordinary cases, the fever disappears at the end of five days, after abundant sweats.

In digestive fabismus, the progress of the malady is the same, with this difference, that the first chill is accompanied by vomiting and violent pain in the stomach. The persons attacked often turn intensely yellow. As in the preceding case, the illness may end in death, but that is the exception. In general, the symptoms disappear one after the other in about four days. In both cases the spleen is enlarged and the sick people are very anemic.

Remedies are prescribed by Dr. Cipriani for this bean disease. His remedies are calomel, antipyrin, and especially chinosol.—Translated for "The Literary Digest."

Pancreatic Secretion.—Dr. H. W. Cushing of Boston read before the American Surgical Association in New Orleans, April 19, a paper describing a case of traumatic rupture of the pancreas with the formation of a hemorrhagic cyst. After evacuation of the cyst, a pancreatic fistula temporarily remained, and the author studied the character and amount of the fluid which escaped with interesting results. He found the spici fic gravity of the pancreatic juice to be 1.011 instead of 1.030 as given by many authors. It was strongly alkaline and the daily amount discharged was 500 to 600 c. c. instead of 300 c. c. as stated by physiologists.

The Blind of Europe.—Of the 302,000 totally blind persons in Europe, 192,000 are in Russia—that is to say, one out of every 500 subjects of the Czar is blind.

A Curious Lawsuit.—A Vienna specialist received $35 for ridding a man of a tapeworm. Afterwards the patient thought he had paid to much, and demanded $20 back. The doctor demurred and was sued. He could not, he argued, put the tape worm back where he took it from, and if he could he was not sure that either the patient or the law would let him. Besides, the tapeworm was dead. The patient complained that it was only a short one. The doctor said he could not find any precedent for removing tapeworms at so much per yard. Finally the doctor gave the patient back $2.50!—"Literary Digest."

Worth Dying for.

Family Physician—Well, I congratulate you!

Patient (excitedly)—Then you think I will recover?

Family Physician—Not exactly; but after consultation we find that your disease is entirely novel, and if the autopsy should demonstrate that fact we have decided to name it after you.—"Tit Bits."

COMMERCIAL NEWS.

Imperial Granum.

It is a prepared food that makes friends wherever its merits become known. The writer has been familiar with it for years, and takes pleasure in relating the following clinical test of its merits:—"The patient, reduced by disease and from the effect of the anoynes necessarily given to alleviate her sufferings, developed malignant cholera-morbus, and for days lay in an almost unconcious condition. As a last resort she was taken to a Boston hospital where the physicians began administering Imperial Granum, prepar ed as directed for acute cases, in very small quantities. After several trials it was retained, and the strength and quantity was slowly increased. After four weeks' treatment taking Imperial Granum only for nourishment, she was discharged from the hospital, and a few weeks later endured a severe surgical operation from which she completely recovered, and to day seems in perfect health.

* * *

Hints in the Treatment of Subinvolution

Among the conditions concerned in the causation of uterine diseases subinvolution is one of the mo st f-quent and important. The reason for this is obvious. If after childbirth or miscarriage the uterus does not undergo completely the normal retrograde process, if it remains enlarged engorged with a hypertrophied mucous membrane inflammatory changes are readily developed and endometritis, displacements and serious pelvic disease may result. One of the chief obstacles to efficient local medidation has been the lack of a topical remedy which could be safely entrusted to the patient. This want has now been fully supplied in Micajah's Medicated Uterine Wafers. These wafers are cleanly unirritating easily applied, and their ingredients exert a depleting effect upon the engorged mucous membrane of the uterus establishing normal circulation and thereby causing the absorption of exudates into the tissues and aiding the natural process of involution.

* * *

A Reliable Food.

Imperial Granum has won the confidence of physicians because many years of clinical experience have proved it to be a form of nourishment that is acceptable to the palate and to the most delicate digestion at all periods of life.

It is successful, not only as an aliment for children, but its rare nutritive excellence in inanition due to mal-assimilation, chronic, gastric and enteric diseases, has been incontestably proven; often in instances of consultation over patients whose digestive organs were reduced to such a low and sensitive condition that the Imperial Granum was the only nour-

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ORIGINAL COMMUNICATIONS.

THE IMPORTANCE OF TRAINING THE SPECIAL SENSES IN THE EDUCATION OF YOUTH.

By Thomas C. Ely, A. M., M. D.

PHILADELPHIA.

A clear idea of the end and object of education is imperative in placing a valuation on special sense training. The popular conception of education has been, that it is a process of putting in. The very etymology of the word disproves this. Education is an unfolding and drawing out of the whole individual nature, a training process which "best evolves and gives force, beauty and perfection to mind and body." In this educational process of individual development our courses of education lay too much stress on the study of languages. They overtax the memory with a world of words and syntax, and burden the mind with an imitation of the thoughts and languages of others, and do not pay sufficient attention to the development of individual and original thought by special sense studies.

It would unfold and draw out and evolve a youth's nature better and with the result of more original life work, if in the preparatory, high school and College courses, there were less of history and languages and more of the special sense methods of the kindergarten, the objective methods which correlate brain and muscle by seeing and doing, and which impress images not by desk-memorized words but by realities, by the real things of nature as they are seen and learned in such special sense studies as life and its phenomena in biology, in both its branches, zoölogy or animal life and botany or vegetable life; in physics and chemistry; in geology and astronomy.

Allegiance to nature—observation and thought of her laws—both develops and fills the youthful mind with facts, as Huxley says, "of the deepest importance for his own and others' welfare, and awakens youth to the richest sources of beauty in God's creation."

The successful educator, like the successful physician, studies nature and applies her methods.

The importance of training our special senses is emphasized by the important fact that all our reasoning, all our so-called imagination, all our knowledge of the world depend on our special senses. By special senses we do not mean the end organs of sight, touch, sound and smell, nor the connecting fibres to the brain, but the centres of the perceptive faculties. These faculties are so closely interwoven with higher mental powers as to attain the dignity of being their supporting pillars, the very foundation of education. The ground work of education must be made secure by special sense training whatever part is allotted to memory and language.

In inculcating a life desire for learning which is no less a part of education than facts and discipline, or knowledge given and faculties trained, there are four essential reasons why special sense studies should occupy a foremost place : first, a physical; second, a physiological; third, a psychological; and fourth, an utilitarian reason. To physicians, the physical reason appeals first.

I. Physical.—The first requisite to success is to be a good animal. In the formative period of youth physical exercise should receive more attention than intellectual. At least, body and mind should be developed evenly. While not literally true, the old saying, "Each generation grows weaker and wiser," conveys the spirit of the text. A healthfully developed mind is impossible in a poorly nourished body, and this physical impossibility is what the pressure of modern education too often attempts to accomplish. Though the gymnasium is doing much, every physician has at all times school-children under his care who have no appetite, who cannot sleep, whose nutrition is suffering solely from lack of exercise and oxygen, whose future mental usefulness will be as much impaired as their bodies are sickly, who, instead of verbal memorizing, should be forced to out-of-door observation, studies or play, for the production of the highest type of manhood.

Without educational supervision, simply left to follow its own will, a child will rapidly augment its perceptive faculties and acquire useful knowledge by its very play-instinct; and this is doubtless true of animals. What part the Olympic games played in Greek intelligence and culture is worthy of speculation. All sports and games not only develop the muscles but cultivate accurate muscle-balance, a keen eye and quick hand, and time is far from lost which is judiciously spent in cricket, rowing, golf, boxing, fencing, tennis, handball, baseball, football, or at the rifle range. As games require more or less accurate and quick judgment, this habit of rapid cerebration is of the utmost value in whatever occupation is followed, be it hand or mind working.

As a practical example of the foregoing, recently in editorial comment upon the physical deterioration of the nations of northern Europe, particularly the Italian, the London "Lancet" says that although intellectually superior to the Northern races, the Latin nations cannot turn their mental gifts to the same good uses as their Northern contemporaries for the very lack of that energy which physical strength supplies, and in explanation is quoted the celebrated physiologist, Dr. Angelo Mosso. Immediately after the overwhelming defeat of the French in 1870-71 the whole of Latin civilization raised the question as to what to attribute the superiority of the victorious race; and literally following Mommsen's statement, that the victory of the Germans was won at the universities, all southern Europe legislated for education modeled after the German ideas; and to this Mosso attributes the root of the present evil. The natural mental and sexual precocity of the Latin speaking races is in itself a source of physical degeneration, and the extra pressure of excessive schooling since 1871 has been a positively morbid factor of their physical evolution. During the period when physical exercise was absolutely essential for their proper development, educational methods predominated and the youth were overtrained mentally at the expense of their physical culture. It might be said that in our country the manual training schools meet this physical difficulty by developing the body in a healthy method of bread-winning, while teaching mathematics, the humanities, and the sciences.

II. Physiological.—The chief physiological reason for cultivating the perceptive faculties is that they develop only by exercise, just as by muscular use the smith acquires a mighty arm. It is seeing colors and realizing harmonies that give energy to the faculties of sight and hearing. The marvelous degree of acuteness developed in the remaining senses in persons who have lost sight and hearing well illustrates what a high state of culture may be attained, and suggests the query whether the physiological functions of all the senses could not be brought to this high standard. In fact, a prominent educator of the blind has declared to his pupils that they are not especially endowed creatures and that every extraordinary perceptive feat by a blind man can be achieved and surpassed by a seeing man, and with even a less amount of practice.

The master mind of Laura Bridgman, blind and deaf, and almost without power of smell and taste, would have remained a blank without the brain stimuli supplied by the wonderfully developed and versatile sense of touch. Helen Keller, becoming deaf, dumb and blind at the age of eighteen months, learned to write and read; and at the age of ten to speak by touching the lips, tongue and throat of her instructor with her fingers and imitating the movements till, in twenty-four days, she had the free use of speech. At a meeting of the American Association to Promote the Teaching of Speech to the Deaf, in Philadelphia, July, 1896, this marvelous girl, in a well-chosen and distinct speech, told the interesting story of her own progress. Recently on placing her fingers on the throat

of a singer she has been able to follow notes covering two octaves with her own voice, and to sing synchronously with her instructor.

Every one marvels how the blind can cross a crowded street or even skate without colliding. The sense of touch of which the skin is the end organ, just as the eye is the end organ of sight and the ear that of hearing, is perhaps the most wonderful of all. As we know, it includes tactile sense, pressure sense, temperature sense, pain sense, and other complex phenomena as yet not understood. A still more wonderful property has been described by Levi Hanks, a blind man, and called "facial perception." Though the blind are imaginative to a high degree, may we not ask, Has this marvelous end-organ of the skin such an unrecognized sense? Hanks can distinguish doors and windows of houses and shapes of dwellings. He can tell whether an object be tall or short, slender or bulky, whether it be a solitary object or a continuous fence. Fog dulls this power, and though darkness does not interfere, a thick veil destroys it by covering the skin of the face "so that the facial impression of the object cannot be transmitted to the brain."

Equally as marvelous as the feats of the blind are the exact eye-measurements of skilled mechanics and marksmen, the recognition of colors by tapestry and mosaic workers. That the Florentine mosaic workers can distinguish eight thousand varieties of red, and that an orchestra leader detects the least falsity of any instrument should be proof enough that we ourselves see few of the world's colors and that we hear few of its sounds, and that our life must be one of special sense selection, the brain taking cognizance of stimuli according to the structural perfection of the perceptive organ and its development.

The mind is empty without these brain-stimuli of sensations which increase the cerebral blood-supply and functional activity. As Carlyle says, "We see what we bring with us the power to see." We do not require larger eyes or larger retinal images, but we need perceptive faculties brought to a higher state of cultivation, and by these we develop the whole brain. Each sensory impulse in its pathway to its brain centre congests areas over which it travels, exercises brain-cells, and develops the brain. By a delicately balanced bed Mosso proves that the slightest brain activity makes the head weigh more and determines more blood to some parts of the brain. It is for educators to decide whether this increased blood supply, this nutrition and development, shall be devoted to memory in poring over the roots and accent of languages, or to those great avenues of intelligence, the perceptive centres, in such special sense studies as natural history and the physical sciences.

In these days of the limitation of knowledge the old adage seems more than ever true that "The greater part of knowledge is in knowing where knowledge is found," and it is not so much a question of what knowledge is of most worth, but what faculties are most worth training.

III. Psychological.—The psychological importance of special sense training is apparent in the close relation of perception to other faculties. It would be difficult to pass the dividing line in a mental act between per-

ception and conception, between special senses and intelligence; and who can say how much intellect is not dependent on special sense perception?

The extent that memory is dependent on special sense is worthy of inquiry. We must first perceive to remember, as memory follows perception. According to Herbert Spencer, memory represents past experiences of the external world, and must therefore largely depend on external stimuli. Sensations externally deposit mental images which represent memory. Mental images of former sensations are already in the brain, and new sensations from the external world associate the new and the old; thus new mental images and the association of old mental images represent memory. The basis then of memory—of mental images, and the association of mental images—are the sensations which deposited the original images. Or, to express it differently, the sight of a flower excites the cerebral cortex or brain and in trace of this cortical or brain excitation a mental image is left as a memory of the flower. In the many hours devoted to arbitrary memorizing in Greek root and accent and involved Latin sentences, in so much word-memorizing from a written page, where occurs the mental image of sensation—the basis of true memory? The page-written word has not the aid of touch and smell, the natural correlation of the senses in producing a mental image as in the case of the actual flower.

Is this word and book-memorizing memory-cultivation without the aid of the special senses, without a real mental image, the purest and truest and most enduring memory? Is this cortical excitation of word-memory comparable to that of the actual mental image, memory developed by natural history and the physical sciences? In the memory-training of our youth are we not tilling rocks by word-memory, when in the same young brain there are fertile fields which would yield rich product if the memory-training were founded on sensations of the real images? Memory, application and attention, the chief claims for the classics, can be better developed by special sense studies.

IV. Utilitarian.—As to the usefulness of the sciences, Thomas Henry Huxley says: "Modern civilization rests upon physical science. The whole of modern thought is steeped in science. Even the mere man of letters who affects to ignore and despise science is unconsciously impregnated with her spirit and indebted for his best products to her methods. Science is teaching the world that the ultimate court of appeal is observation and experiment. She is teaching it to estimate the value of evidence. But of all this your old stereotyped system of education takes no note. Physical science, its methods, its problems and its difficulties, will meet the poorest boy at every turn, and yet we educate him in such a manner that he shall enter the business world as ignorant of the existence of the methods and facts of science as the day he was born. The modern world is full of artillery, and we turn out our children to do battle in it equipped with the shield and the sword of an ancient gladiator."

The commercial value of the sciences is so apparent that comment is almost superfluous. It would seem to descend to a lower plane in the dis-

cussion of education, which, in its best sense, has been defined as "seeking after happiness" to mention utilitarianism; yet on this practical application of knowledge society thrives. From the usefulness of telegraphy, of heat, lightning and locomotion, of electricity, to that of the steam engine, of every machine, of every preparation of iron and steel, of almost everything in a mechanical way we see, hear, and use in our home, on the street, or in our place of business, of everything we wear, even our food, our diet, all depend upon the laws of science,—of chemistry, physics and biology. The wealth, comfort and gratification of civilized society beyond the savage in his hut depend upon the utility of the sciences. Scientific education, special sense perceptive education, presents a still higher grade of usefulness in the faculties it trains. All sciences teach observation and experiment, comparison and classification, deduction and versification, and natural methods of memorizing. Such education is both inductive and deductive, representing the common sense training required for success in every-day life. By common sense, which has been called organized science applied to the certainties of daily life, one trained only by the observation and thought of worldly contact too often outstrips the memory-trained college youth. Accurate observation is the basis of not only our own profession but of all original thought and work. Not only in medicine and surgery, but in everything, observation is the mother of discoveries.

The study of humanity we accomplish largely by observation. How much knowledge of human nature is due to close special sense observation of our fellows? The accent of the voice, the words, the manner, the expression of the face, the observation of another's eye, mirroring every mental mood, affords the special-sense educated youth a psychical skiograph by which he sees and hears the inner workings of a mind and knows those true motives of action which are seldom formulated and never known except by this method of observation.

A word more concerning the memory-training of the classics may not be amiss. When we overtrain the memory by verbal memorizing without the association of perception, we not only dwarf the memory but weaken perception. It is not learning words and phrases but acquiring sensations and reasoning on them that gives a powerful mind. Observation and experiment, not memory, afford a knowledge of nature, and nature, seeing things as they really are, is the chief power of Hellenism. Granted that Greek literature is an universal standard, that Greek philosophy is all philosophy, and that the ideals of the classics are beautiful and elevated; yet, with full recognition that "the proper study of mankind is man," and that this result is chiefly obtained through the humanities (i.e. literature, history and language), with the highest appreciation of their value as representing the highest achievements of the human mind, we call any educated men (other than a Greek or Latin professor, to whom construction has become mental instinct) to witness whether in his classroom work in Greek and Latin translation he obtained much more than the mental gymnastics of syntax; whether he obtained many of the thoughts, or any insight into the mind or soul of man.

Latin as the basis of the Romance languages, particularly French, Italian and Spanish, would seem more important than Greek; but is even Latin indispensable to the best knowledge of modern languages which in the 19th century are not studied wholly by books as they were in the 15th century? Human history as embodied in Greek and Latin literature is open to us in English and can be secured without ten years' class-room work over the syntax of the original. Greek and Latin human history in the sense that a Greek professor himself enjoys it and therefore argues for it, is never obtained by a student in class-room translations. In this limited time for much knowledge does it pay to spend a large share of youthful life to acquire these thoughts in the original? We know too well the beautiful imagery is lost in construction, and we wallow in a quagmire of syntax. The noble Greek race did not attain their high standard by compelling their youth to pore over the language of another people, but their out-of-door life and their uses of their special senses taught them nature and gave the modern world models in statuary and architecture as well as in literature and philosophy. So long as we are taught to be Greek imitators we will never be originators. The traditional formula of classical teaching introduced in the fifteenth century by the Jesuits still holds, because we are imbued with the idea that we must have a classical course to be scholars. Perhaps by fashion, and surely contrary to reason, we are still following the same stilted idea. If a personal exchange were possible of the knowledge acquired during the six years of Latin and five of Greek, as was the course of many of us or even the more limited modern courses, for the more complete knowledge and actual benefits of such special sense studies as zoology and botany, physics and chemistry, geology and astronomy, is there one who would not quickly effect the change? Instead of losing anything in memory-training, in beautiful thoughts, in imagery, would we not gain everything in the fulness and enjoyment of life, in what we call happiness and success so far as it can be given by education, by training and by culture?

The part shared by history in wrongly training and over-training memory in arbitrary book-memorizing is open to almost the same criticism as Greek and Latin. Herbert Spencer says: "That kind of information, which in our schools, usurps the name of history—the mere tissue of names and dates and dead, unmeaning events—has a conventional value only; it has not the remotest bearing upon any of our actions; and is of use only for the avoidance of those unpleasant criticisms which current opinion passes upon its absence." History, as often taught in our schools, does not train the most valuable faculities of the mind, and the knowledge gained is not commensurate with the time required; and the training too often overtaxes and weakens memory and perception. Along with the classics it could be well curtailed for more special sense training.

Upon the educational value of the sciences, Herbert Spencer remarks: "That increasing acquaintance with the laws of phemomena which has, through successive ages, enabled us to subjugate nature to our needs, and in these days gives the common laborer comforts which a few centuries ago kings could not purchase, is

scarcely in any degree owed to the appointed means of instructing our youth. The vital knowledge that by which we have grown as a nation to what we are and which now underlies our whole existence, is a knowledge that has got itself taught in nooks and corners; while the ordained agencies for teaching have been mumbling little else but dead formulas."

In our college courses the late impulse toward the sciences is well grounded. Our book life has made us an artificial people. In art galleries we are enraptured with a marine view, a landscape, or a scene of sweet home life, that we never notice in nature. With our books we are deeply affected in an artificial way by thoughts that should have in a real way been aroused by nature. The poetic expression of the beauty of the lily, the picture of a flower, should be associated with the beauty of the lily itself. All the beautiful thoughts in all languages about the lily or about the clouds, sunset, ocean, forest, or any of nature's phenomena do not approach the beauty of the realities daily about us and open to our enjoyment from our own faculties. It is the awakening, the developing of these faculties for original thought, to which education of youth should tend. For physical reasons, for physiological reasons, for psychological reasons, for reasons of utility, the curriculum should centre less about memorizing and more around the development of the perceptive faculties. The truest education is not in memorizing school books but in schooling a youth's faculties of perception, judgment and reasoning in the great book of nature.

ACUTE INFECTIVE ARTHRITIS AND CELLULITIS.

By J. O'Conor, M. A., M. D.
Senior Medical Officer, British Hospital, Buenos Aires.

In my first paper published on this subject, I endeavored to explain my reasons for abandoning such terms as acute rheumatism, acute rheumatic arthritis, and rheumatic fever, and the more my operative experience in this malady increases, the more convinced do I feel that such nomenclature is as meaningless as it is unscientific. From the constant curative results obtained in eight consecutive cases, little or no doubt remains in my mind, that this is an infective disease, which requires prompt surgical treatment.

In the course of these operations, I have gleaned a few facts, which may be of interest. I have now opened four ankle joints and three wrist joints, and in each instance I was surprised to find the interior of the ar-

ticulation perfectly normal, although considerable swelling, pain, tenderness, and stiffness with general toxemia existed prior to operation.

At first I was inclined to think that the lesion might be an infective thecitis, but in subsequent cases I found no microscopic evidence of inflammation, or distension of the tendon sheaths, therefore I can only conclude that the symptoms are due to an infective infiltration of the cellular tissue.

In future it is not my intention to perform arthrotomy on an infected wrist or ankle, unless free incisions fail to establish a cure. Another point worthy of notice is the ready response, of what may be designated smouldering, or sub-acute cases to the liberal use of the scalpel (vide case I). This is all the more remarkable, since these are often the very ones which baffle medication, and one would have thought that from the prolonged immersion in infective material, the tissue cells would have become so permanently altered that some thickening and loss of function were certain to remain.

While claiming for surgery a specific role, I wish it to be clearly understood that in my opinion "half-hearted" arthrotomies are as useless as they are dangerous. The affected joints must be carefully opened, digitally explored, irrigated and drained, and if the general and local symptoms do not at once disappear, irrigation and drainage must be fearlessly persevered with. I have proved, at any rate to my own satisfaction, that an injured or infected knee joint may be kept open, washed out, and drained for a week, with as little risk, as similarly treating an ordinary abscess cavity.

My guides to the cessation of drainage are (a) disappearance of general toxemia, (b) the joint having resumed its normal contour, and (c) the absence of serious discharge, or excessive synovial secretion.

In cases of infective cellulitis of wrist or ankle, I liberally open up the area of tumefaction and tenderness, and freely expose tendon sheaths, and capsular ligament; the wounds having been irrigated with mercurial lotion, are packed with gauze, and allowed to heal by granulation.

Active motion is encouraged at first dressing, and no splints are used. Needless to say no medicinal or blanket treatment is adopted, and the patients are given full diet as soon as their appetite demands it.

In conclusion, I have every hope that before this century ends acute rheumatism, under another name, will be declared a free port for general surgery.

Case I. T. D., aged 40, painter, admitted to hospital on February 24th, 1898. History.—Ten months ago he "caught cold," and suffered from pain and swelling in left hand and wrist. After some weeks these symptoms gradually disappeared. Three months later pain returned in wrist, and two months afterwards his left ankle and foot became swollen and stiff. For the ensuing five months he was unable to work. On admission, the patient presented a miserable appearance; he was unable to walk, carried his left arm in a sling; temperature 99.°3, tongue furred, slight sweating, emaciated, anorexia, urine scanty, high colored, no al-

bumen or sugar. Left foot swollen, red, painful, and stiff; any attempt at passive movement causing intense pain. The area of tumefaction and tenderness was limited to the front of ankle, and dorsum of foot. Left wrist and back of hand were in a similar condition. There were no pain and swelling in any other joint, and his organs were healthy.

Past History.—He had gonorrhea fifteen years ago, but never suffered from syphilis, plumbism, or lung trouble; in fact he never had any serious disease.

February 26th. The dorsum of left foot was freely incised (three long incisions). The cellular tissue between the tendons was thoroughly opened up, the capsular ligament exposed; a considerable quantity of serum oozed from the cut tissues, but on opening the ankle and three tarsal joints nothing abnormal was found.

The wrist and back of hand were similarly treated, but the joint contained no abnormal fluid.

Second day. The dressings were changed; the wounds were aseptic; all swelling and redness had vanished. There was slight active motion without pain.

Fifth day. General symptoms disappeared; free and painless movement in both articulations; the patient asked for solid food.

Tenth day. He was allowed out of bed.

Twenty-fourth day. The wounds healed, and he was discharged cured. Before leaving the hospital he ran 90 yards in bare feet on a tiled floor without a limp or ache.

Case II. A. Mc., aged 26, sailor, entered the hospital on March 1st, 1898. History.—On February 14th he "caught cold on board," and immediately afterwards felt pain in the left ankle; on the following morning the left knee became swollen, stiff and painful; he lost appetite; complained of fever and "dry" tongue.

On admission his temperature was 100°; his tongue furred; the left knee was considerably distended, flexed and painful, and the patella floating. The left ankle and other joints were normal. Urine scanty, no albumen; organs healthy; never had any serious disease, excepting gonorrhea five years ago.

March 2d. Arthrotomy, six ounces of greenish turbid flocculent serum removed; irrigation and drainage.

March 3d. Drain changed; slight action movement.

March 7th. Drain dispensed with; action movement through a right angle.

March 9th. Allowed out of bed; movement normal. Discharged cured, and returned to work, with a normal left knee joint on March 25th.

Case III. J. F., aged 46, laborer, admitted on March 1st, 1898. History.—February 23d, "slept in wet hay, and caught a severe cold." On February 24th the right knee and right ankle joints became swollen, stiff and painful. February 27th left knee followed suit.

On admission.—Temperature 101°; dirty tongue, profuse sweating; both knee joints were swollen, distended, flexed, and very painful; right ankle and foot were swollen, red, and tender to the touch. Patient com-

plained of extreme pain in these joints. No organic disease. Past and family histories nil.

March 2d. Three long incisions were made in the dorsum of the foot; serum poured from incised surfaces, but on opening the ankle joint nothing abnormal was encountered. Arthrotomy was then performed on both knee joints; four ounces of the usual muddy serum were removed from the right, and two ounces from the left.

Third day. General toxemia had vanished.

Fifth day. Drains left out; allowed out of bed on March 14th, and discharged cured on March 28th. Before leaving the running test was applied, with a perfect result.

A LOUPE FOR DISTANCE.

By Edmund Landolt.

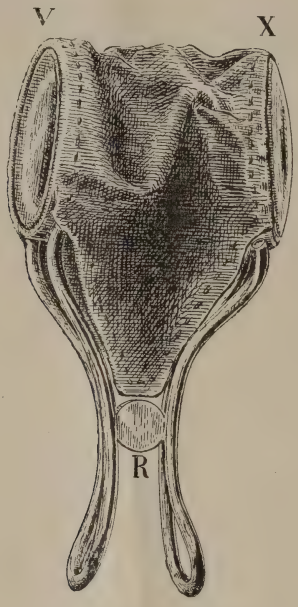
(Translated by the Editor.)

When the visual acuity of a person is greatly lessened, we sometimes attempt to improve near vision by the aid of a loupe, and this means has often rendered the semi-blind a signal service. By increasing the size of the retinal images imperfections in the dioptric system or of the nervous apparatus of the eye are partially remedied. Images badly perceived, on account of their obscure contour, are better analyzed by the retina when they are very large. A retina dulled in sensibility is still able to distinguish images when they occupy a sufficiently large portion of its surface.

It has been a question of moot if the same principle be not applicable to distant vision. Certainly it is not difficult to increase the images of remote objects. The telescope does this; but even the terrestrial telescope does not admit of practical application in the cases of amblyopes who need assistance in vision when in the street, in the house, in the salon or to look about them. To be of any practical importance to the amblyope, any instrument for visual assistance must be portable, and easy of manipulation and rapid adjustment. The instrument herein described is constructed on the principle of the telescope of Galileo: a combination of a strong, concave ocular with a weaker, convex objective.

Each of the lenses V and X (fig. 1) is mounted on an arched stock. The two stocks are joined by a spring which, in a state of rest, keeps the lenses together, the lower portions of the stock, the shorter, are open, the one from the other. This allows an instrument of very small size which can be easily carried about the person or covered with

the hand. The least pressure exerted on the lower ends of the stocks causes the two lenses to separate, thus enabling the patient to adjust the instrument in a most simple and prompt fashion manner to every distance required.



A LOUPE FOR DISTANCE.

In order to exclude all lateral light the lenses are surrounded and joined by a black cloth which folds and unfolds according to the distance at which the lenses are separated. The numbers necessary and convenient to give a sufficient magnification (at least two diameters, equaling four in surface) without great separation of the lenses are twenty-eight dioptres for the concave and twelve for the convex lens. It goes without saying that the lenses should be corrected for any marked error of refraction, either spherical or cylindrical. Of course, achromatic lenses contribute still more to the perfection of the instrument.

We have employed this loupe for distance for ten years, and with it we have rendered great service to persons whose vision was much impaired—by opacities or irregularities of the surfaces of the dioptric media, or by lesions of the fundus, partial atrophy of the optic nerve, etc.

REVIEW OF MEDICINE.

MEDICINE.

Report of a Case of Long-Continued Abnormally Low Temperature. (*Medical Record*, April 30, 1898.) By John Williams, M. D.

The case is one of great interest and the author could find no parallel in medical literature. The only rational idea of the processes involved seems to be a complete suspension of metabolism. The case was diagnosed as tuberculous meningitis. The history is as follows :

April 4th, 1896, Mrs. H. P. A——, primipara, was delivered of an apparently healthy male child, weighing nine and one-half pounds; the labor was normal in all respects. The mother made a prompt and uneventful recovery, although she was distinctly tuberculous. The father had a bad family history. The babe was vigorous and well developed. On account of the pronounced general tuberculous condition of the mother the child was put on artificial food from the first. It thrived and did apparently well until June 1st, when some slight digestive trouble appeared, which yielded to careful regulation of diet and digestive aids. There were occasional outbreaks of digestive trouble during July. From the 1st of August until the 14th the child appeared to be in good condition. He found well-marked febrile movement, great restlessness, turning of the head from side to side, occasional vomiting, slightly relaxed bowels, unequally dilated pupils. On the 15th of August the cerebral symptoms were more marked—eyes wide open and staring, pupils dilated, with some slight retraction of the head. On the 16th there were occasional slight convulsive movements, exaggerated reflexes, the temperature reaching its highest point, 104.2° F. The convulsive movements were controlled by warm baths with bromides and hyoscyamus. The temperature remained high, varying from 102° to 104° F., with an occasional convulsive movement, till August 20th, when there was an apparent amelioration of the symptoms, the temperature dropping during the day to the normal; but the child was inert, with expanded pupils, and poor reflexes, and in a state of stupor. It took food freely when the nipple was placed in its mouth ; the bowels were normal, and the bladder was evacuated normally. The temperature gradually declined during the night of the 20th, reaching 96° F. in the rectum on the morning of the 21st. The pulse was 126; respiration 14. The temperature gradually farther declined during the day until it had reached 92° F. On the evening of the 21st the respiration was 12; the body was cold and dry; the reflexes were abolished except for a slight movement of the right

leg when the sole of the foot was tickled. On the morning of the 22d the temperature was so low that Williams could not get a registration with his thermometer, which was not graduated below 92° F.; respiration, 10; pulse, 100; body cold and dry; no reflexes. The child continued to take food, though slowly. By a thermometer which was graduated down to 90° F., with a long stem, he was able to protract the graduation down to 87° F. On the evening of the 22d the temperature was 92° F.; respiration, 10; pulse, 100. The child still took food slowly, but in smaller quantities. The functions of the bowels and bladder were still performed, but at longer intervals. It lay perfectly quiet in whatever position it was placed, with no apparent rigidity and presenting the appearance of a hibernating animal. On the morning of the 23d the temperature had dropped still farther, the thermometer registering 89° F., rectal; respiration, 10; pulse, 96. The general condition remained the same throughout the day, except that the temperature gradually declined until it registered 88° F. at 7 p.m. On the morning of the 24th the temperature had dropped still farther, and it did not rise above 87° F., the lowest limit of the thermometer below which of course he could make no observation. The body felt like a corpse, apearing to have the temperature of the surrounding atmosphere. The child still swallowed food when it was placed in his mouth, but swallowed very slowly and with no apparent difficulty. Respiration, 9, slightly Cheyne-Stokes in character, and continuing so but becoming more pronounced during the day. This condition persisted throughout the 25th, 26th, 27th, and 28th. On the morning of the 29th the temperature had risen to 90° F.; the breathing was pronouncedly Cheyne-Stokes; the interval of suspension of breathing was from thirty to forty seconds; pulse, 90; food was swallowed no longer. The bowels and bladder were evacuated about once in twelve hours. During the 30th and the 31st the child's condition remained about the same, except that the respirations dropped to 6, pronouncedly Cheyne-Stokes; the temperature, rising during the night of the 31st, reached 94° F. on the morning of September 1st, when the flickering candle went out.

A Simple, Painless and Perhaps New Method of Vaccination; Denudation Versus Scarification. (*The Journal of the American Medical Association.* By M. Hutchins, M. D.

A method in vaccination of denuding the surface of the skin with a caustic in place of the lancet is described.

The point to be vaccinated is cleansed. A piece of cotton as large as the desired denudation is wet with liquor potassæ and laid on, or a little of the fluid is laid on with the bottle-stopper. After two or three minutes, or as soon as slight burning is felt—it usually does not burn at all—the cotton is removed, if it was used, the soap mixture which has formed with the skin secretions is wiped off with a piece of wet cotton; an ink eraser, a piece of soft wood or a piece of gauze or cotton is then used to rub away the softened epidermis, when the vaccine is applied and allowed to dry on in the usual way. The friction necessary is very slight and there

is no pain except a slight stinging sensation when the nerve filaments are exposed.

The advantages are its practical painlessness, the absence of terrifying instruments, and of bleeding (which is a bar to successful inoculation). The vaccination is as liable to be successful, perhaps more so, than the common method.

A Case of Transposition of the Viscera. (*Boston Medical and Surgical Journal*, Jan. 13, 1898.) By H. F. Vickery, M. D.

The author reports the following interesting case in a man of 27 years in excellent health. He was in the habit of taking violent exercise, and under these conditions only suffered considerably from dyspnea. He came under observation as an applicant for life insurance. On physical examination, the heart, the liver, and spleen were found to be transposed from their normal positions to the opposite side of the body. Inflation of the stomach and of the colon showed the stomach to be to the right side instead of the left, and that the descending colon was probably to the right. The fluoroscope showed the shadow of the heart and the great shadow of the liver upon the right side. Aside from this he was in all respects like other men.

S. McC. Hamill.

Asynchronous Contraction of the Ventricles. (*Bolnitschnajagaseta Botkina, Nos. 36-40 St. Petersb. Med. Woch. Beilage No. 1., 1898.*) By Jarotzki.

He reports the case of a woman, 40 years old, who had had rheumatism eight years previously, and for a year past had suffered from dyspnea and general venous stasis, anasarca, pulsation of cervical veins, ascites, hydrothoras, and pulsation of liver. Under rest in bed, diet, and digitalis the patient improved, but the symptoms of tricuspid insufficiency persisted. The heart became irregular, and reduplication of the sounds was noted. There were two loud first and two soft second sounds. The first sound corresponded with the apex-beat; at the first sound of the second phase the jugular veins filled and the liver enlarged. This indicated that the left and right ventricles contracted independently. This anomaly alternated almost daily with normal breath action, the pulse being 88 in the latter and 44 in the former phase.

A period of improvement was followed by embolism of the mesenteric arteries, after which the heart anomaly returned, but somewhat modified. While at first only a single apex-beat was palpable, there were now two, a strong and a weak one. In addition, there was noted before the jugular pulsation, a smaller pulse-wave, showing that hemisystole existed in which two venous pulsations corresponded to one pulse of the arteries. The autopsy (the patient died of erysipelas) revealed stenosis of the mitral valve, dilation of the apex of the left ventricle, cirrhosis of liver, embolism of superior mesenteric arteries, and acute hemorrhagic peritonitis.

Riesman.

Multiple Aneurisms with Arterio-sclerosis. Presenting Large Aneurisms of Both Popliteal Arteries, of the Thoracic Aorta and the Circle of Willis. (*Journal des Sciences médicales de Lille.*) By M. A. Besson.

The patient was a man, 68 years of age, a journalist by profession, and with good family history. His previous history was negative as concerns the present illness. Although with such a disease of the vascular system it seems strange the patient died of a broncho-pneumonia. Several times during the course of the disease patches of edema appeared upon the limbs, puncture of which would allow a serous fluid to escape.

The autopsy revealed the following conditions: Considerable general edema of the right leg, no ascites; the intestines distended. The lungs were pronouncedly emphysematous, and their bases congested. The stomach was normal. The liver weighed 1,870 grains, was smooth and fatty, and contained no calculi. There was no sclerotic change. The kidneys were normal. The heart was dilated and fatty, and weighed 500 grains. There was no valvular lesion, but there were plaques of calcareous deposits upon the thickened aortic valve. The aorta was dilated, very thin and bent down upon itself, becoming more marked as it reached the abdominal portion. Just below the coeliac axis and posteriorily was a dilatation about the size of a nut. Atheroma was general throughout the aorta, giving it a yellowish color and a nipped appearance, especially around the origin of the intercostals. At a level of the groin and extending down the right leg was an indurated mass in which ecchymosis was well marked near the knee; the femoral artery was dilated to the width of four fingers, and all the muscles of the inside of the thigh were infiltrated with blood, with great destructive change in the muscle-fibre. In the middle of the abductor longus was a large pocket filled with blood clots which weighed 800 grains: upon being removed it was found to be lamulated and towards the periphery was firmly adherent to the walls of an irregular cavity. The lower side of the femur was denuded to quite an extent. The sciatic femural vein was adherent to the sac. The popliteal vein was filled with clot. The popliteal artery was dilated and filled with an old clot. This was continuous with a sac that occupied the upper part of the calf and was quite firmly adherent to surrounding structures, making dissection difficult.

On the left popliteal was an aneurysmal dilatation about the size of a hen's egg, filled with soft clot, which was adherent to the posterior wall. In the neck the carotids were dilated with a general thinning of the walls, atheroma was marked, and where they connect in the skull to form the circle of willis there was a dilatation about the size of a hazle-nut. The oculomotor nerve was adherent to the mass.

NEWCOMET.

THERAPEUTICS.

The Action of the Tincture of Strophanthus in Heart Disease, (*Klinisch-therapeutische Wochenschrift* No 11, 12, 13, 14, 1898.) By Dr. H. Jacobæus.

In this article the author has made a comparative study of digitalis and strophanthus in diseases of the heart. Since the introduction of digitalis into the medical world one hundred years ago, it has been recommended for every imaginable disease, but after a time the true indication became more apparent and its efficiency seemed greatest in cardiac disorders.

Just when and in what form of heart-trouble this drug should or should not be administered is an unsettled question. Gisolle believes it does harm when given in stenosis; Lebion believes it as contra-indicated in insufficiencies; Gublier and Fothergill believe it should never be used in aortic stenosis, while its greatest use is in valvular failures; Neimeyer uses it in mitral stenosis; Potain in mitral insufficiencies, while other men express different opinions not only on this subject, but also in the mode of preparation, amount and manner of administering the drug.

As a class cardiac stimulants are more or less unsatisfactory, due to the inability of the diseased heart to respond, and often do harm to these weak organs by straining the already diseased tissue. The reason bad effects are not more often noticed after the use of heart tonics is due to the smallness of the dose. He believes digitalis is especially harmful in some forms of heart-disease, not so much by stimulating the organ, but from rise in blood-pressure due to its action upon the vasomotor constrictors. The slowness and uncertainty added to its accumulative action and its tendency to disturb the stomach make it undesirable. Attention is called by him to the difference of opinion expressed by various authors, some believing that the rise in blood pressure is due solely to the stimulation of the heart muscle, while others affirm that it is from direct action upon the heart and partly central. Its diuretic action, according to the author, is not so much due to its action upon the kidney-substance as it is to the elevation of blood-pressure.

In experiments and observations with strophanthus both the active principle, strophanthin, and the tincture were used, the latter being given the preferance. It acts more rapidly than digitalis; Fraser has observed a difference of 24 beats, fifteen minutes after its administration, and Penzoldt a decided slowing of the pulse in less time. It lacks the accumulative action, has no effect upon the peripheral vessels, and, theoretically, is an ideal heart stimulant, although in some cases digitalis seems more efficient.

Heart tonics should never be used when compensation is fully established, and in cases of failing compensation rest in bed, low diet and proper hygiene without the administration of any cardiac stimulant will give much better results. He cites a case of mitral stenosis and regurgitation with hypertrophy and dilatation with secondary changes in other

organs, which after years of compensation is suddenly overthrown with palpitation, shortness of breath, loss of appetite, kidney-insufficiency, coughing, and later, edema, showing the gradual failure of the heart. Should a cardiac stimulant be given in such a case it would simply increase the labor of the heart, causing greater strain with a consequence of more destructive change that would necessarily hasten collapse.

Although according to theory rest would seem the only requirement in any case of heart-failure, some cases demand cardiac stimulants, and where these are to be employed he believes strophanthus to be the most efficient; in cases of long continued use, however, where it proves unsatisfactory, it may be alternated with digitalis.

He mentions cases treated by rest in bed without medication, those treated with strophanthus alone, those with digitalis and some with strophanthus and digitalis. During the course of the day twenty, thirty or more drops of tincture of strophanthus were administered in small divided doses. Of digitalis he used the infusion.

NEWCOMET.

A New Method of Administering Unguentum Hydrargyri. (*Boston Medical and Surgical Journal*, March 27, 1898.) By Richard Hogner, M. D.

Velander has finally given up spreading the ointment over the skin and relies entirely on the application of the ointment to the inner surface of a pillow-case, which is to be fastened about the patient's body, from the neck, downward. This method is now so generally accepted in Sweden that it is there almost the only one at present used in the administration of mercury externally.

The pillow-case is made of cheap cotton cloth. It measures 38 by 54 centimetres (15 by 21 inches), and has ribbons for its suspension over the chest. The ribbons are placed two laterally at each edge, 12 centimetres (4¾ inches) above the lower corners, and four upward, namely, two opposite each other at the upper edges, 6 centimetres (2¼ inches) from the corners. The ribbons are about 64 by 1.5 centimetres (25 by 0.5 inches).

The pillow-case is suspended from the shoulders with the external part of its medicated side toward the body—that is, under the clothing—and is held in position by the ribbons which are tied around the waist and over the shoulders down to the waist ribbons. It is worn consecutively for ten days, alternating every twenty-four hours from the front of the chest to the back, fresh ointment being supplied every night without wiping off the old. After ten days a new pillow-case is applied. Baths are to be taken once or twice a week, the skin under the pillow-case being washed every night.

Dr. Velander uses, besides this ointment treatment, all necessary local treatment, etc., and with the ordinary attention to the month, he has not met more stomatitis than usual. The quantity of ointment used is six grams (1¾ drachms). This simple treatment is very convenient for the patient, as he can go about comfortably as usual, is not bothered with

any painstaking rubbing, keeps himself easily clean, and at the same time can easily conceal his treatment. This pillow-case method is also very satisfactory for the doctor, as the mercury seems thus to be absorbed quicker, with less irritation.

SURGERY.

Remedial Measures in Obstruction of the Common Bile Duct.

(Abstract of paper read before the American Surgical Association, April 20, 1898.)

By J. McFadden Gaston, M. D., Atlanta, Ga.

The cases of jaundice which result from the temporary closure or constriction of the common bile duct are usually left to the treatment of the physician, and yet are the precursors of derangements which require surgical interference and, hence, come within the sphere of this paper. They commence with functional disturbance, but terminate in organic derangements.

Murphy lays great stress upon the relief of jaundice by pilocarpin. The reliance of the greater number of practitioners for relief in this class of cases has been, and continues to be, on the phosphate of soda. But there have been more good results claimed from the employment of olive oil, internally, than from any other remedy of this class. After exhausting medico-chirurgical means of treatment for biliary complications, without arresting obstruction of the common bile duct, the surgeon is confronted with certain conditions calling for operative interference. There may exist a stenosis, or stricture of the walls of the duct, without occlusion of the canal, dependent upon inflammation, or there may be a partial obstruction of the lumen of the duct from the presence of a gall-stone which permits the bile to pass around it to a limited extent. In some cases Fenger has demonstrated that a gall-stone may be so located as to form a valvulur closure. Though an outlet may be artificially provided for the bile by connecting an opening in the gall-bladder with one in the abdominal wall, there is not always relief to the cholemia, and its effects upon the general health of the patient continue even to a fatal termination. In a case presenting no enlargement of the liver the incision should be made on a line an inch and a half below the border of the costal cartilages, and should be about three inches in length.

He has elsewhere given an unfavorable opinion in regard to exploratory puncture, and does not consider it entitled to recognition as a means of diagnosis or measure of treatment. The various measures recognized for the relief of obstruction of the common duct by gall-stones are breaking up of the calculi by the needle, crushing by padded forceps, forcing them into the gall-bladder or duodenum, catheterization, and excision through the walls of the duct. In some cases it is impracticable to attach the gall-bladder to the parietal opening or to suture the incision

in the wall of the duct when a stone is extracted, and thus it becomes necessary to provide for drainage by packing with gauze, around the field of operation, and leave the ends of the strips extending out of the wound.

In doing operation upon three white women for obstruction of the common bile duct by forming a fistulous opening for the bile externally, the cholemia persisted in an aggravated form until death supervened in each case. In some conditions of temporary impediment to the flow of bile through the duct into the duodenum, the attachment of the incised gall-bladder to the parietal opening has relieved the obstruction and been followed by the restoration of the bile. It is in order to state that only in complete occlusion of the duct, which has proved intractable to other procedures, has an artificial opening from the gall-bladder or the common bile duct into the alimentary canal been thought proper.

This anastamosis is effected in various ways, either with the duodenum, the small intestine, or the colon, the last named being least desirable, as it fails to secure the advantages of the bile in the process of intestinal digestion. His experiments upon dogs demonstrated the feasibility of this fistulous communication of the gall-bladder with the bowels, and it is a matter of minor importance by what process it is accomplished.

The statistics in the past show that the various modes of procedure are comparatively free from danger and are attended with a marked degree of success, so that we may reasonably expect cholecystenterostomy to be recognized as a safe and efficacious recourse in the future annals of surgery.

The First Complete Removal of the Human Stomach in America; Probably the First Total Gastrectomy in the World. A Contribution to the History of this Subject. (*Medical Record* of March 19, 1898.) By John C. Hemmeter, M. D.

The author states that the main object of his communication is to call attention to the fact that the first total extirpation of the human stomach was executed in America long before Dr. Schlatter's recent widely-heralded operation in Switzerland. The credit for such priority he shows is clearly due to Dr. Connor, of Cincinnati, who removed the stomach entire, and attempted to unite the esophagus with the duodenum, more than twelve years ago. Connor's operation was reported in the "Centralblatt für Chirugie," 1885, page 549 ; and 1886, page 566 ; and was referred to also by Haberkant in the "Archiv für Klinische Chirurgie," Bd. li., Heft. 3. The operation was unsuccessful, the patient, a female, aged 50, dying soon afterward. The author refers also to various other more or less complete removals of the human stomach by surgeons, both foreign and American. He does not include one such operation by a Philadelphian, Dr. J. M. Baldy, which, though done in October, 1893, was not reported until March 5, 1898, a date subsequent to the time when Dr. Hemmeter's paper must have been written. A

report of Dr. Baldy's case appeared in the Journal of the American Medical Association of the above-mentioned date. The patient had an enormous sarcoma, involving almost the entire stomach as well as part of the esophagus and the mesentery throughout the entire abdomen. Dr. Baldy in describing his operation, after referring to the formidable condition found upon entering the abdomen, says : " I accepted the inevitable at once, continued my dissections, removed all the large mass, and quickly ligating bleeding points, made an effort to form a pretence of a stomach of the small piece remaining of cardiac end, esophagus, and gut, and closed the wounds. The patient lived about thirty-six hours, complaining of both hunger and thirst." Dr. Hemmeter's article makes it very apparent that Schlatter's achievement was by no means that of a pioneer, the human stomach having been removed completely at least twelve years before by an American surgeon, and that very nearly complete extirpations of the same organ (the small piece of stomach left having been of no use to the patient) had been done a number of times before, in some instances successfully. It will always remain, however, the great distinction of Schlatter to have been the first to cut away the entire organ without a fatal result.

BOARDMAN REED

The Operative Treatment of Calculi which have been Lodged for Long Periods in the Lower Third of the Ureter. (*Edinburgh Medical Journal*, March, 1898.) By E. Harry Fenwich, F, R. C. S. etc.

The operation to be selected for the removal of a calculus from the ureter will depend upon the point at which the stone has lodged, as ascertained by catheterization of the ureter. In the upper third a lumbar incision is indicated, and at the pelvic brim the abdominal incision for extraperitoneal ligation of the common iliac artery. Below the latter point the ureter may be reached in the male by a transverse perineal incision followed by dissection upward between the bladder and rectum, and in the female by incising the roof of the vagina. If the urine be sterile a permanent fistula need not be feared.

The author relates the histories of two cases. In the first, a male, in which the presence of a calculus was demonstrated by rectal examination, the perineal route was successfully followed and in the second case, a female, the vaginal incision was employed. After extraction of the calculus in each case a drainage-tube was inserted in the lower end of the dilated ureter for about a week, until the tissues had become condensed around it, thus avoiding the danger of urinary infiltration. After removal of the tube the fistula closed rapidly in each case.

JOPSON.

Case of Removal of the Entire Stomach for Carcinoma: Successful Esophago-Duodenostomy: Recovery. (*Boston Medical and Surgical Journal*, May 5, 1898.) By Charles B. Brigham, M. D.

The newspapers at the time published more or less sensational accounts of the above-mentioned case, but this is the first authentic report

of it. The operation was performed for cancer of the pyloric region involving the larger part of the stomach. It differed from Schlatter's, in that the lower end of the esophagus was joined directly to the duodenum, and the Murphy button was employed to economize time. The patient was an Italian woman, aged 66, who had previously enjoyed excellent health, thus confirming the observations of Leube, Kuttner, and others that symptoms of gastric carcinoma are apt to appear rather suddenly without any warning history of previous indigestion. The operation took place on February 24th, 1898, in San Francisco, and is the first case in this country in which the entire stomach has been removed successfully. The time consumed was two hours and a quarter. Chloroform was used at first until unconsciousness was produced, and afterward ether. The patient did remarkably well in spite of the development of two abscesses which were opened under ether, and from one of which six ounces of pus were taken. As in Schlatter's case vomiting occurred a number of times during the after treatment, but by the end of three weeks the patient was eating considerable meals composed in part of semi-solid food, such as oysters and soft-boiled eggs, and on the twenty-second day she took part of a lamb chop " in addition to two dozen oysters (small California oysters) and several spoonfuls of ice cream," all apparently at a single meal. It is sufficiently well known that the pancreatic and intestinal juices are abundantly able to digest all the food needed for nutrition when it is gradually fed into the duodenum as occurs under normal conditions; but it is surprising that in this case by the pouching of either the esophagus or duodenum, what amounts to a new stomach so far as concerns its reservoir function, must have been formed in three weeks' time. By the end of seven weeks the patient was entirely convalescent with normal functions, and had gained six pounds in weight.

BOARDMAN REED.

OBSTETRICS AND GYNECOLOGY.

Rupture of the Vagina during Labor. (*Monatschrift für Geburtshülfe and Gynakalogie*, Feb., 1898.) By Carl Everk.

Everke reports five cases of rupture of the vagina during labor. Two occurred in women upon whom instrumental delivery was necessary, one followed version, the other two occurred spontaneously. Two of the women died of sepsis. Most ruptures of the vagina are caused by lack of skill on the part of the operating obstetrician, but, as in two of the cases, they may occur spontaneously. In contracted pelvis, transverse position, etc., the descent of the presenting part is impossible and the contracting uterus draws the cervix up over the presenting part. This traction transmitted to the vagina, results in rupture, if its walls are relaxed and tender, and the fetus forced out of the uterus through the cervix, passes into the abdominal cavity. If the tear is discovered while

the fetus is still in the uterus, delivery per vias naturales may still be possible, and even if the fetus and placenta have entered the abdominal cavity celiotomy should be avoided unless the extreme contraction of the pelvis render it necessary. With care the vaginal tear ought not to be made worse by delivery per vaginam while the dangers of sepsis cannot be lessened by an abdominal section. After delivery the tear should be sewed up to prevent hemorrhage and further infection of the peritoneum.

L. S. Smith.

The Intra-uterine Application of the Colpeurynteur. (*Monatschrift für Geburtshulfe und Gynakologie.* Feb., 1898.) By Fritz Klenhaus, Assistant in Prag.

Klenhaus confirms the favorable opinion of A. Muller ("Monatsch. für G. u. G.," Nov., 1896) in regard to the efficacy of balloon dilatation of the cervix and vagina. He reports the results of its use in seven cases in which the induction of premature labor was indicated, and sums up his conclusions as follows :

1. " Balloon-dilatation " is a valuable means of inducing labor, acting more rapidly and more certainly than the methods heretofore employed.

2. It may fail in cases in which there is an abnormal rigidity of the cervix with inertia of the uterus; pains may cease completely after a short period of activity.

3. In eclampsia of pregnancy it is the best means of effecting a rapid delivery with the least injury to the patient.

4. It is not applicable as a means of producing abortion, as the necessary dilatation of the cervix preliminary to the introduction of the balloon is usually sufficient to excite uterine contractions.

5. The inelastic model recommended by Champetier de Ribes gives better results than the original elastic one.

[The balloon of Champetier de Ribes is a pear-shaped inelastic bag of thin, strong silk tissue, coated inside and out with rubber. To the small end is attached a rubber tube by which the bag is distended with liquid after it has been introduced, folded lengthwise and grasped by a long slender forceps, into the lower uterine segment. Steady traction made upon the tube hastens the dilatation of the cervix.]

L. S. Smith

Escharotics in the Treatment of Uterine Cervical Cancer. (*The British Gynecological Journal,* November, 1897.) By Herbert Snow, M. D.

The best escharotic to use upon the cervix is potassa fusa, because it is effective, and its action and all pain can be stopped at once by the addition of water. Next to it in value is zinc chlorid, but it causes severe pain and often some shock for several days. The potassa should be applied only twenty minutes at a time, and the vagina protected by wet sponges, packed around the cervix. We should not curette first, because

it only involves hemorrhage, shock, risk of sepsis, and obstructs the view. The potassa alone will soon shrivel up the granular tissue without any hemorrhage. Of the other remedies, the actual cautery is far too superficial, if used alone, and the same may be said of bromin. Nitric acid and silver nitrate do more harm than good. The entire uterine cervix can be eradicated without risk by escharotics. When used on advanced cases there is always marked improvement. When there is a cauliflower-like growth it is best treated by crystallized iron perchlorid, preparatory to radical extirpation by the potassa.

GIRVIN.

PEDIATRICS.

Remarks on the Use of the Farinacea in the Diet of Later Infancy. (*Archives of Pediairics*, April, 1898.) By D. J. Milton Miller, M. D.

In this paper, read before the Philadelphia Pediatric Society, the author says it is in every-day experience to see an infant which has thriven on the breast or artificial food during the first year, suffer continually with digestive disturbances during the second year and the first half of the third. The cause of this condition is undoubtedly due, in most instances, to the tendency of the mother to put the child too early upon too strong food for its digestive powers, giving it undiluted milk, bread, crackers, potatoes and strong porridges, which result in frequent attacks of indigestion, and, if the diet is persisted in, the establishment of chronic intestinal indigestion. The most potent cause, however, is the excessive use of the farinacea, or their employment in a form not adapted to the child's digestion. The most harmful being oat-meal and potatoes, the latter should not be given until the twenty-fourth to thirtieth month, and should always be baked. Rice pudding he also mentions as being difficult of solution by the digestive juices and prone to ferment.

In the diet of later infancy the farinacea should occupy a secondary place, and be given with great care and caution; the occurrence of acid fermentation, etc., nervous symptoms, particularly at night, and uratic deposits in the urine should be regarded as an indication for their diminution or removal. Until the eighteenth or twentieth month they are best given in the form of gruels and jellies, given in the milk and for making these gruels or jellies wheat or barley, as they contain less starch, are preferred to oat-meal. When there is difficulty in digesting this mixture of milk and gruel the addition of dry extract of malt or extract of pancreas with ten grains of soda about ten minutes before administration is recommended.

Bread, unless crushed and mixed with the milk, should not be given before the twenty-fourth month, as it is not until this age that the teeth are all through, the muscles of mastication well developed, and the digestive powers vigorous and strong. After the eighteenth month rare or

raw scraped beef or mutton, and occasionally eggs, may be given, and fruit juices and baked apples should form part of the diet early, especially if sterilized milk is used.

KINNE

Fragilitas Ossium. Notes on the History of a Family in which it Appears to be Hereditary. (*British Medical Journal*, Feb. 19, 1898.) By J. Hunter, M. B., C. M., Glasg,

The author reports the following case. A boy at the age of nine years fell a distance of seven feet, fracturing the right femur. Two years later, while playing foot-ball, he fractured the left femur. He received another fracture of the right femur in a game of foot-ball two years later. An investigation of his family led to the discovery that one sister had fractured each of her femurs on different occasions. Another sister, from a slight fall, had broken her right femur. A brother fractured the right femur while playing, and two months later, on being lifted out of bed, re-fractured it at the same point. The father had fractured his right femur four times, and his left three times. The first occurred when he was nine years old, and last when he was 41. Three other children in the family have escaped fractures. There was no history of osseous defect in the father's family. The general health of all the children was good.

S. McC. HAMILL.

NEUROLOGY.

The Exercise Treatment of Locomotor Ataxia. (Editorial in *University Medical Magazine*, May, 1898.)

The treatment of locomotor ataxia by exercises calculated to teach the patient again the co-ordination of muscles that has been lost by degeneration of the lower sensory neurons has recently attracted considerable attention, and has won for itself the support of many noted neurologists, among whom may be mentioned Leyden, Jolly, Mendel, Eulenberg, Oppenheim, Gerhardt, and Remak. This method of treatment was first introduced by Fraenkel, and has for its prime object the conversion of the simplest ataxic movement into a normal one. In a communication to the "Deutsche medicinische Wochenshrift" for December 17th, 1898, Fraenkel describes the various exercises for the hands, arms, body, and legs. For exercising the upper extremities the following directions are given: Sit in front of a table, place the hand upon it, then elevate each finger as far as possible; raising the hand slightly, extend, and then flex each finger and thumb as far as possible; do this with the right and then with the left hand. Touch with the end of the thumb each finger-tip separately and accurately; then touch the middle of each phalanx with the tip of the thumb. Sit at the table with a large sheet of paper and a

pencil; make a dot at each corner of the paper and one in the centre, and draw lines from the corner dots to the centre dot, first with the right and then with the left hand. Put ten coins on the paper, pick them up and place them in a single pile, first with the right and then with the left hand. For the body and legs sample exercise: Sit in a chair, rise slowly to erect position without help of cane or arms of chair; then sit down slowly; stand with cane, feet together; advance left foot and return it; then the same with right. Walk slowly ten steps forward and five back with help of canes. Stand without cane, but with the feet a little apart and the hands on the hips; in this position stoop down by flexing the knees, and rise slowly. Stand without cane, but with the feet separated; raise the hands from sides above the head; carry them downward and forward, and try to touch the toes. Walk along a fixed line on the floor by help of a cane, placing each foot in turn on the line; then repeat without using the cane. Most of these exercises should be repeated several times, and the movements should be made with the eyes both open and closed.

Owing to disturbance of the sensory paths tabetics have lost the sense of fatigue, so there is some danger in overdoing the treatment. Two things are therefore insisted upon; first, every movement must be done with the greatest possible exactitude, since it is not simply physical exercise that is aimed at so much as training in co-ordination; and, second, the seance should not last more than eight or ten minutes, and no more than two should be allowed a day.

In the pre-ataxic stage the exercise treatment has in a number of reported cases prevented the development of inco-ordination. Even in advanced sclerosis remarkable results may be obtained; in a number of instances patients, bedridden for three, four, and five years, have been taught to walk without assistance. The improvement may last for years, if the disease is stationary or only slowly progressive. According to Fraenkel the treatment is absolutely contra-indicated in cases of acute or subacute ataxia.

Kalinin ("Vratch," No. 7, 1897), who has used Fraenkel's method in five cases of locomotor ataxia, draws the following conclusions: By this treatment the loss of motion can be restored to a satisfactory degree, the gait and locomotion gradually becoming safer and firmer. The sense of locality and that of movement, and the skin sensibility, are but little improved. Romberg's symptom very soon became less pronounced. The duration of treatment should entirely depend upon the prognosis and the degree of the motor disturbances present, but in any case it should not be less than a month. No ill effects were observed when the treatment was interrupted at short intervals of two or three weeks, but not longer.

Raichline, who has treated twelve cases, with complete success in eight, concludes that the conditions of success are a long, as opposed to a short, course of treatment, a well-nourished condition, good sight necessary for watching the movements accurately, a certain amount of energy and intelligence, not complete loss of sensibility, and the absence of arthropathies.

Paresis of the Lower Extremities, Resulting from Work. (*Deutsch. med. Woch.*, November 4, 1897.) By H. Kron.

The patient was a maid-servant, 16 years old, with neuropathic family history. She had suffered from palpitation of the heart, throbbing in the head, and cold hands. Two years before presenting herself for treatment she had been obliged to arrange pieces of peat upon the ground, and for seven weeks had knelt continuously throughout the day upon the damp earth. From the beginning of this labor she had noticed that her feet had a great tendency to go to sleep. At the end of a week they were cold and stiff. At the end of the seventh week there was pain, tingling in the feet with paroxysms of cramp in the flexors of the sole. The feet were weak and the toes in walking dragged along the ground, the symptoms being more severe upon the right side. In the course of two years the left foot returned to its normal condition, but the right still was subject to cramp, had foot-drop, and was cold. The examination showed atrophy of the right tibialis anticus and extensor digitorum communis. The achilles tendom reflex was absent on both sides; the patellar reflex was present. There was no disturbance of sensation. The electrical reactions of the diseased muscles showed partial degeneration. In regard to the pathology of the condition, Kron is of the opinion that the peroneal nerve suffers more than the tibialis anticus on account of the pressure to which it is subject in passing through the fibrous canal between the soleus, peroneus longus, and fibula, particularly when the muscles are stretched as occurs in kneeling. The prognosis is favorable, and the condition is rare only because the majority of persons alter their position or give up their work as soon as the first symptoms are apparent.

SAILER.

PATHOLOGY.

A Reagent for Albumen. (*Klinische-therap. Wochenschrift.*) By Riegler.

Betha-naphtalinsulphuric acid ($C_{10}H_7SO_3H$) is a substance of white color, resembling mother of pearl and in bulk having a reddish tinge; it is easily soluble in water and alcohol but only sparingly so in ether. According to Riegler it acts very much like trichloracetic acid upon albumens. It precipitates albumens, albumoses and peptones when in solution (a reaction may be obtained when 1 part of albumen is dissolved in 40,000 parts of water). The precipitates of albumens remain in the presence of the re-agent upon boiling, but albumoses and peptones disappear when the solution is warmed and re-appear upon cooling. The best method of applying this re-agent is to take 5-6 c.c. of the liquid (urine) and add 20-30 drops of a 5 per cent. solution of betha-naphthalinsulphuric acid to it and if albumen is present it will cause a distinct turbidity.

NEWCOMET.

Nasal Bacteria in Health. (*New York Medical Journal*, Feb. 5, 1898.) By Wm. Hallock Park, M. D., and Jonathan Wright, M D.

The authors in the study of this subject selected a series of normal noses. They trimmed away the vibrissæ in the vestibule with sterile scissors, then carefully wiped out the vestibule and the external integument with a 1/2000 solution of bichloride of mercury. The cultures were made from the nasal mucous membrane as far back as possible from the surface covering the anterior and middle turbinated bodies and the septum. They used a slender steel rod with some absorbent cotton attached to the end, which had been previously sterilized. The swab was passed through the flame before using. The greatest care was exercised to avoid its coming in contact with the surface of the vestibule on withdrawal. With these they inoculated gelatine and serum tubes and agar and serum plates. They examined 36 subjects. In six of these cases no bacteria developed. There were less than 50 colonies in eight cases, between 50 and 100 in eight cases, more than 100 in fourteen cases. Of the six sterile cases, in five the mucus was removed with a platinum wire loop. The amount of mucus was so small as to explain the negative result.

In addition to the above, the authors killed two rabbits, quickly removed the calvaria and brain and gained access to the nasal cavities through the base of the skull under antiseptic precautions. Cultures made from the mucus obtained in this manner showed abundant growth of bacteria. The variety of bacteria depended upon the culture medium. Serum and serum-agar showed the greatest number of growths. No streptococci were found. In 60 per cent of cases in which the nasal mucus was examined, in children living in an asylum, streptococci were found, and in all of these cases the mucous membrane was not entirely normal. They noted the fact that diphtheria and pseudo-diphtheria bacilli remain a long time in the nasal cavities of those convalescent from diphtheria. They found that a serum-bouillon culture of a streptococcus, which had been made extremely virulent for rabbits, when dropped into the nostrils of two rabbits caused death in one on the second, and the other on the third day, suggesting that the mucus was not sufficiently bactericidal to destroy the bacteria. They also found that the nasal mucus from one case, after sterilization at 55° C. for an hour on two successive days had no bactericidal effect upon diphtheria or pseudo-diphtheria bacilli, stapholococci, streptococci, or a coccus obtained from a normal mucus. In two cases the nasal mucus membrane which was obtained on sterile cotton had no bactericidal power upon the same organisms. There was a very decided bactericidal action in both the sterile and non-sterile mucus upon the anthrax bacillus. Sterile sheep serum had the same power. They attribute the comparatively small number of bacteria in the nasal mucus of the normal individual to "first, the action of gravity; the clear serum draining down from the regions in the nose to which the inspired air does not have free

access, washes away the bacteria deposited by the tidal air." Second, "to the action of the cilia supplementing that of gravity." Third, "to the fact that the nasal mucus, which possesses little or no bactericidal power for most bacteria, is not a good medium for most bacteria to grow in." Fourth, "to the filtering action of the vibrissæ when they exist." Fifth, "to the fact that ordinarily inspired air contains very few pathogenic germs, or, in other words, these germs are accustomed to grow in both fluids."

S. McC. Hamill.

OPHTHALMOLOGY.

The Prognostic Importance of the Appearence of Eye Lesions in Interstitial Nephritis. (Editorial in the *Journal of the American Medical Association*, January 1, 1898.)

A study of the statistics of this subject is not without interest. Two years ago, Belt was led by his search through the literature of the subject into feeling that a more hopeful prognosis might be given in cases of Bright's if strict adherence to the family physician's counsel as to therapy, regimen and prophylaxis was observed. With this preconceived idea in view, Belt brought together the data of 409 cases furnished by most of the prominent ophthalmologists of the United States. But his hopes fell, for when the accumulated facts had been statistically arranged it was learned that of 409 individuals the subject of albuminuric retinitis due largely to living at the pace that kills, 155 were cases in private practice, of which number 62 per cent. died within one year, 85 per cent. in two years, and 15 per cent. lived more than two years. Of the 77 hospital cases, 85 per cent. died within one year, 93 per cent. within two years, and 7 per cent. lived more than two years. Of the remaining 187 mixed cases, 65 per cent. died within one year, 93 per cent. within two years, and 7 per cent. lived more than two years. And if these facts be properly collated, it is plainly shown that the large majority of the victims of albuminuric retinitis die within the first year after the appearance of the eye lesion, fully 90 per cent. die before the expiration of the second year from that time, while a scant 10 per cent. drag out a weary existence stretching over ten years sometimes and even to seventeen years as in the minister reported by Webster.

The foregoing statistics, then, establish a scientific truth of two-fold value. First, in that it enables the practitioner to prognose intelligently in a given case; second, by reason of such authoritative prognosis, the sufferer, who is usually of the well-to-do class, may be acquainted with the suddenness with which his malady may terminate, permitting him to that follows upon the death of most of those who are unfortunate or im- so arrange his worldly affairs as to set aside all necessity for the litigation provident enough to die intestate.

PRACTICAL NOTES.

The Treatment of Bronchietasis.

Arnold Chaplin, in "Treatment" of November 11th, 1897, tells us that in the treatment of bronchiectasis a drug is needed which, while it is strongly antiseptic, must at the same time be pungent and acrid enough to induce violent expulsive efforts. The dilated tubes once being emptied can be kept in that state by repeated recourse to the treatment. A substance which answers these conditions is the common commercial coal-tar creosote. It is antiseptic, acrid, and penetrating, and easily gives off fumes on heating. Three years ago the writer began the use of this substance, and after giving it a thorough trial became convinced that it offered many advantages over other forms of treatment.

In order to obtain success with this method the details must be carefully studied, as in that lies the secret of relief. The mode of application is as follows : A room about seven feet square by seven feet high must be obtained, and this must be rendered tolerably air-tight. It is well to have the room on the top of the house, or away from it, as there will be less chance of the vapors generated from the creosote causing annoyance to those living in the house. In the centre of this room a small stand about one and a half feet high is placed, and on this an ordinary spirit lamp, which admits of being raised or lowered. Over the spirit lamp, on a tripod, an enameled tin dish is placed, and into this is poured about half a pint of the coal-tar creosote. The creosote is heated until the dense, pungent fumes are given off. The patient, clothed in an old dressing-gown, is placed in the room as soon as the lamp is lighted. As soon as the fumes begin to come off, an urgent desire to cough comes on, and soon the cough becomes more or less incessant, and attended with the expulsion of large quantities of phlegm. After the sitting has lasted from half to one hour the patient may leave the room, and wait until the next day before taking another sitting. This should go on steadily from day to day for two months. For the first day or two not much benefit will be noticed, but very soon the expectoration becomes less and the odor less disgusting, and before very long the patient, who before was unbearable, is able to mix with his friends, and, unless he has a fit of coughing, his breath is quite free from smell.

When the writer first tried this treatment he believed that after undergoing two months of it the patient was practically cured, but subsequent investigation has convinced him that he must take a sitting at least three times a week if he will keep his expectoration free from odor. With the cessation of the fetor comes increased appetite and strength. After three years' experience of this treatment the writer has not hesitated in saying that it is superior to all others in his hands, and that although it may not cure, yet it certainly keeps the disease well under control, and opens up to the patient the certainty of enjoying health, strength, and social inter-

course, to which before he was a complete stranger. All his cases, with but few exceptions, have been adults. Children do not bear the treatment well, and the benefit to them is not nearly so marked.

A few words may be said about the disadvantages of this method. In the first place the treatment is an unpleasant one, and it requires all the persuasive powers of the physician to keep the patient up to the necessity of going on with the application of the drug ; but after a few sittings patients generally become used to it. Secondly, the fumes of the creosote produce running and smarting of the eyes and nose; but this can be prevented by introducing two plugs of cotton-wool into the nostrils and covering the eyes with a pair of glasses rimmed round with india-rubber. Beyond these there are no drawbacks to the treatment, and it can confidently be recommended as likely to improve the condition of the patient if persevered in for sufficient length of time.—" Therapeutic Gazette."

On the Treatment of Some of the More Common Eye Affections.

" The Edinburgh Medical Journal " for November, 1897, contains a continued article by Mr. Berry with this title, in the course of which he tells us that the treatment of cases of conjunctivitis with marginal ulceration of the cornea should be the same in most respects as that devoted to the cure of keratitis and conjunctivitis alone. Lead lotions must, however, be avoided, as they lead to dense white deposits in the cicatrices, which remain after the ulcers have healed. Where the ulcers are superficial and small, a drop or two of a weak nitrate of silver solution (one grain to one ounce) may be dropped into the eye, after an irrigation with boric acid lotion, once daily for three or four days. This often at once induces healing, even in cases where the ulcers have continued in much the same state previously for a couple of weeks or longer. The ulcers often cause a good deal of pain. To allay this, cocaine may be used (two to five per cent. solution of hydrochlorate), but it is not advisable to apply it very frequently—for instance, every half-hour, as is often done. Immediately before and after each irrigation is sufficient to give relief. It is a good plan, too, to instil a few drops into the eye the last thing at night, as the local anesthesia thus caused often allows the patient to fall asleep, which the pain otherwise prevents. Eserine drops are often recommended for the treatment of catarrhal as well as for other forms of corneal ulcer. The writer has never been able to satisfy himself that they are of any use at all for this purpose, and as they are sometimes actually hurtful, they should not be used. Dark glasses are particularly indicated in all cases of conjunctivitis with marginal corneal ulceration.

Deeper and more rapidly extending marginal ulcers should be brushed once or twice with chlorine water (full strength), or if this is not available, with a two per cent. solution of nitrate of silver. The brushing, to be effectual, should be done with some force, the camel's-hair brush being dabbed on to the ulcers several times so as to bring the antiseptic properly in contact with all parts of their surface. By

using cocaine this can be done without causing any pain to speak of. Afterwards, dusting with finely powdered iodoform is useful after each irrigation. The application of iodoform in powder is preferable to its use either in ointment or in gelatin disks, the latter of which dissolve in a few minutes and leave only a comparatively small quantity of the iodoform, "in situ." When deeper marginal corneal ulcerations exist, in the absence of much conjunctival secretion, it is sometimes a good plan, if they do not tend to heal, to cover them with a flap of conjunctiva. This is done by undermining the surrounding conjunctiva with scissors and stitching it forwards.

The main characteristics of the forms of conjunctivitis which have been so far considered are the nature of the secretion from the inflamed mucous surface and the rarity of corneal complications.

In purulent conjunctivitis, on the other hand, serious corneal mischief has always been dreaded. There are, probably, several causes of purulent inflammation of the conjunctiva. Much the most frequent cause, and the one which gives rise to changes which may be taken as the type of those caused in other ways as well, is the gonococcus inoculation. This is met with as gonorrheal ophthalmia and in new-born infants as ophthalmia neonatorum.

Apart from the copious and distinctively purulent secretion of gonorrheal conjunctivitis, which shows itself in two or three days after the first symptoms of irritation have begun, there is rapidly developed a great, often an excessive, inflammatory swelling and tenseness of the eyelids. The ocular conjunctiva and subconjunctival tissue is also swollen, tense, and edematous. This is what is called chemosis. In a few days the tenseness in the lids and ocular conjunctiva, especially the former, subsides, but the pus continues to be formed in great quantity.

It is important, and usually not difficult, to recognize early the specific nature of the conjunctival inflammation. The tense swelling of the lids and chemosis are, in fact, characteristic. The only thing which might mislead one is the appearance presented by severe cases of a mucopurulent type which have been persistently poulticed for a day or two. But even in these there is an absence of the hard, tense swelling presented by most cases of gonococcus or similar infection.

Having regard to the grave consequences to the cornea which a purulent conjunctivitis may entail, the treatment has to be considered not only from the point of view of what is best for the infected eye, but also with regard to prophylaxis in the case of the other eye. Indeed, the first thing which should always be done whenever there is cause to diagnose a gonorrheal or other purulent conjunctivitis of the one eye, is to actively disinfect the other, and then secure it against the risk of subsequent infection—a risk which, it must be remembered, exists so long as the purulent discharge continues. The disinfecting of the sound eye is, of course, undertaken on the supposition that it may possibly have been recently inoculated, and may be done in the following way: After dropping a little cocaine solution into the conjunctival sac, the lids

are everted, and the mucous surfaces, including as far as possible the folds, painted over with chlorine water. The lid margins are then rubbed freely with little pledgets of absorbent cotton-wool moistened in the same antiseptic. This is followed by a free irrigation of the whole conjunctival sac, with not less than a pint of a two per cent. boracic acid solution. A little iodoform or boracic ointment is lastly rubbed along the lid margins and the occlusion bandage applied.

The first indication to be complied with in adjusting an occlusion bandage for this purpose is, of course, to secure the eye from any chance of becoming inoculated by the purulent secretions from the other side ; the main risk of such inoculation occurs at night. When the discharge is copious, and the patient lies on the side of the sound eye, some pus may readily find its way across the bridge of the nose, or even be transferred unconsciously by the patient's hands. Such an accident may be prevented by covering the sound eye with a good-sized pad of absorbent cotton-wool, held in place by a properly applied bandage. The following plan may be recommended : Next the eye—i.e., immediately over the closed lids—place a circular piece of lint (two to two and a half inches in diameter) which has been dipped in boracic lotion. Powder a little iodoform over its inner edges, and then cover this with a pad of absorbent cotton-wool, which, to the inner side at all events, projects a little beyond the lint. The pad is then secured, first, by two pieces of thin tape plaster (one-fourth or one-half inch), placed diagonally across it from forehead to cheek, and further by a domett or thin flannel bandage, eight to nine feet long and two and a half inches wide. One turn of the bandage may first be taken round the head, beginning from the opposite side to that of the eye which is to be covered ; the next turn is carried down over the pad below the ear ; and the third over the upper part of the pad, and covering in the ear. This occlusion bandage need not be changed more than once every second day. Such a bandage, while effectually preventing direct inoculation, has the disadvantage of depriving the patient of the use of his eye. In most cases this is tantamount to keeping him in the dark altogether, as the pain and swelling of the lids make it impossible to see with the affected eye. This privation, added to the trouble and anxiety which his condition causes him, has a very depressing effect upon the patient. It is, therefore, better, as soon as possible, to adopt some arrangement whereby sufficient protection is provided against inoculation, while at the same time the good eye is not altogether thrown out of use. The simplest and most readily prepared contrivance of this nature is what is known as Buller's shield. This consists of an ordinary watch-glass fixed in an aperture between two pieces of adhesive plaster. The shield may be made and applied in the following manner : After cutting out a rectangular piece of paper five inches long by four inches broad, this is held over the eye in such a position that its inner border just covers the middle ridge of the nose, and its lower border lies horizontally on a level with, or slightly below, the lowest point of the nostril. A circular opening, half an inch or so less in diam-

eter than the watch-glass which has been procured for a window, is then cut in the paper, the centre of which should coincide as nearly as possible with that of the pupil when the eye is directed straight forwards. From this paper pattern two pieces of rubber or other adhesive plaster are cut. Then, holding these two pieces together with their non-adhesive surfaces in contact, and so that the edges and apertures exactly coincide, a strip one inch wide is cut off the top and one-half inch wide off either side of one of them. The watch-glass, with its concave side downwards, is laid on the adhesive surface of the smaller piece of plaster, so as to cover in the opening, and the plaster securely fixed round the concave rim of the glass in this position. This piece with its glass is then fitted to the other, so that the two lie with their adhesive surfaces in contact in the same position as they did when the surfaces were reversed. There is thus formed a shield, three margins of the under surface of which can be readily fixed along the forehead, down the side of the cheek, and along the nose. The lower edge is not plastered to the face, so that air gets in behind the shield and prevents dimming the glass.

In applying the shield the watch-glass should be secured in a suitable position in front of the eye, and particular care should be taken that the margin along the nose adheres tightly. An extra strip of plaster may with advantage be fixed over this margin. The advantage of Buller's shield over a regular occlusion bandage is not confined to the relative comfort which the patient obtains ; an additional advantage is that it does not, as a rule, require to be changed, as it admits of a ready inspection of the eye by the surgeon.

In the treatment of the inflamed eye every thing must be done which is calculated to prevent the cornea becoming involved. It is well to recognize that the main, if not the only, cause of an accompanying corneal ulceration is an inoculation with the specific discharge in places from which the protecting epithelial surface has been removed. The denuded cornea is certainly easily inoculated. Possibly inoculation may take place even when the epithelial covering remains intact. It certainly does not do so readily, and, therefore, from a clinical point of view it is well to keep before one the desirability of providing as far as possible for the protection of the epithelium. Careful handling is, therefore, a most necessary precaution. Removal of the epithelium is too often caused by forcible opening of the swollen lids. Owing to the pain and swelling of the lids, it is, no doubt, often difficult to get a proper view of the eye without using some force. Perhaps the best plan is to instil a few drops of a solution of cocaine (two to five per cent.) into the eye, and then separate the lids by the finger tips applied to their margins, taking care not to allow the nails to scrape on the cornea. Indeed, the use of the cocaine should be as much to facilitate gentle handling as to diminish the pain which an examination causes the patient. This is often forgotten, yet it is of great importance. Cocaine should only be used during any manipulations which the treatment renders necessary, not at other times. Elevators or speculum should in general be avoided, and

when introduced, and whilst "in situ," must be kept held away from the cornea, so that the epithelium may not be injured in any movement of the eye. Strong caustic solutions are also liable to injure the corneal epithelium when applied to the conjunctiva. Those most commonly in use are solutions of nitrate of silver and corrosive sublimate. The former should not be used on this account stronger than two per cent., or ten grains to the ounce, and the latter not more than .002 per cent. But it is better to avoid these solutions altogether.—"Therapeutic Gazette."

The Employment of Dover's Powder.

In the so-called rheumatic diseases, says Liégeois ("N. Y. Med. Jour.," No. 1006, p. 37), the sudorific and sedative action of Dover's powder may be made use of in the following manner: The patient remains in bed, wears a flannel gown, and is covered with blankets. If it is an ordinary case in adults, ten grains are given in three doses at hourly intervals As soon as perspiration sets in it is well to give a very hot aromatic drink in the intervals between the doses. When sudation reaches its height it is maintained as long as it is desired, for twelve hours if necessary, by keeping the patient covered with blankets.

Dover's powder is a valuable remedy in the beginning of measles and scarlet fever, when the eruption is not well developed, and if much fever and agitation exist. A single dose of 4 to 5 grn. will cause copious perspiration in children. The author never gives this powder to children under four years of age, and always administers it in one dose. The hoarse cough in the beginning of measles is always very favorably influenced by the following mixture:

Dover's Powder,	3 grn. (0.2 gme.)
Washed Sulphur,	3 grn. (0.2 gme.)

In the beginning of influenza, Dover's powder is also useful; it considerably ameliorates the catarrhal laryngitis and tracheitis, the pains in the limbs, and even in fever.

In case of pulmonary congestion the following formula may be used:

Dover's Powder,	5 or 6 grn. (0.3 or 0.4 gme.)
Quinine Sulphate,	5 or 6 grn. (0.3 or 0.4 gme.)
Powdered Hyoscyamus,	1½ grn. (0.1 gme.)

This makes one dose, and two such doses are to be taken daily. This powder is a good expectorant. The expectorant effect may be increased if the sputa are hard to detach, by the following mixture:

Dover's Powder,	2 grn.
Ammoniac,	¾ grn.
Siam Benzoin,	¾ grn.
Anisated Sulphur Balsam,	2 drops.

For one pill. Five or six such pills to be taken daily at intervals of from two to three hours.

Dover's powder is also very efficacious in the acute diarrheas, as follows : In the diarrhea a frigore of adults, in doses of from 4 to 8 grn.; in the diarrhea of infants during teething, in a dose containing only ¾ of a grn., notably at night; and in the diarrhea which is coincident with the decline of measles and accompanied by a frequent fatiguing cough. —" American Medico-Surgical Bulletin."

Preservation of the Hymen.

Kelly says : In case an examination is actually necessary, it must be made by one who is thoroughly competent to decide at once whether or not there is any disease present, and who will be able to proceed at once to do all that may be required to relieve it. By dilating a cervix, or rupturing a large Graafian-follicle cyst, or breaking up adhesions, oftentimes all can be done at once which it is possible to do at all, and the patient will be spared the distress of useless and endless so-called " treatments," which consist in the application of drugs to the vaginal walls or to the cervix, anatomical structures distant from and quite distinct from the supposedly affected organs.

I would urge that there are satisfactory methods of examining young women which need shock no sensibilities and which inflict no injury upon any organ. In the first place, if the patient has not been examined and treated before an examination is necessary, it is my invariable practice to propose to do this under complete anesthesia, in this way securing a perfect relaxation, with every facility for making the minutest investigation which it is possible to make, short of actual inspection through an abdominal incision. The anesthetic obviates the inevitable resistance of the abdominal walls, and the examination leaves behind it no disagreeable memories. In the second place, when the patient is anesthetized the examination must be conducted through the rectum. The cervix can be easily palpated through the recto-vaginal walls; and as for the body of the uterus, the ovaries, and the tubes, they cannot be clearly palpated in any other way. The rectal examination is therefore not only to be recommended because it spares the hymen, but because it is actually indispensable to a thorough investigation.

I have shown on another occasion that the most minute examination may be made by the rectum if the pelvic organs are first skeletonized by putting the patient in the knee-breast position to let in the air and so getting rid of the intestines. After doing this the examination is conducted in the dorsal position. If the finger is not more than 6.5 centimetres in circumference, it may often be inserted into the vagina, slowly and with extreme care, without rupturing the hymen; this is, however, not a good rule, for the tactile sense of many men seems to be so blunt that there is no appreciation of resistance when delicate structures are being investigated, and harm is done unawares.

In the third place, if it is necessary to dilate and to curette the

uterus, this may be done by introducing a finger into the rectum and locating the cervix, and then introducing a pair of tenaculum forceps into the vagina and carefully opening them, and catching the cervix and drawing it down to the outlet, where it may then be dilated and curetted, in many cases, without injuring the hymen.—"American Journal of Obstetrics."

The Curative Action of Hydrastis Canadensis.

In the "Indépendance Médicale" for April 17th, M. Marini, of Bagdad, relates his experience with this drug in the treatment of hemorrhage in cases of hemorrhoids, tuberculosis, and dysentery, and states that he has obtained remarkable results. He cites several cases of hemorrhoidal hemorrhage, of which the following is an example: The patient was a native of Bagdad, who had suffered from hemorrhages for more than fifteen years. At each discharge he lost a good deal of blood, and sank into a condition of syncope from which it was difficult to resore him. The author practiced hypodermic injections of ergotine in the affected region, but the hemorrhage persisted, and finally he resorted to the following mixture :

Fluid extract of hydrastis canadensis,.....60 grains
Sweetened distilled water, ...3.5 ounces

A dessertspoonful of this was taken every hour during the day. To this mixture, he says, thirty grains of Bonjean's ergotine may be added without inconvenience.

The blood ceased to flow a few hours after its administration, and its employment was continued for ten consecutive days. There has been no return of the hemorrhage since then.

In cases of alcoholic excess it is more difficult to control the hemorrhage, and a slight loss of blood may continue after the employment of the drug, although it is insignificant in proportion. Alcohol, the author thinks, seems to be an active and injurious agent in causing the return of hemorrhages of this character, and it should be absolutely proscribed, otherwise the patients are exposed to dangerous relapses.

Regarding the good effects of this drug in tuberculous hemorrhages, the author concludes that it is the best pulmonary hemostatic. Huchard's observations, he says, confirm this. Concerning the hemorrhages of dysentery, the author states that twice he has been enabled to completely suppress them with this drug after all other measures had failed.

He calls attention particularly to the favorable and almost invariable effect that hydrastis exercises on hemorrhoids, whether internal or external. This product possesses generally an indisputable elective action of constriction in the various forms of chronic phlebitis; it is at the same time a very energetic vaso-constrictor and a tonic for the veins. This

action was almost constantly met with by the author in cases in which he used the hydrastis to combat hemorrhage. Strangulated or irreducible hemorrhoids are reduced with the greatest facility. In cases of this nature the action of the drug is rapid and sure, more so than that of ergotine. Under its influence the hemorrhoids become diminished in size and disappear after the treatment has been sufficiently prolonged.

M. Marini observed also that the hydrastis sharpened the appetite, strengthened the enfeebled powers and the tissues, increased the respiratory movements, hastened organic assimilation, and restored the gastric functions.

This product has one convenience, that of slackening the cardiac beats when it is administered in large amounts—that is, from sixty to ninety grains a day—and it is therefore contra-indicated in persons with a permanent slow pulse and in chronic cardiac affections.

M. Marini employed this drug many times as an oxytocic, and found that it was not so rapid in its action as quinine, but he always used it without the least danger in the following formula :

Fluid extract of hydrastis canadensis,..... 60 grains
Sodium salicylate, ... 38 grains
Sodium borate, ... 45 grains
Sweetened distilled peppermint water,..... 3.5 ounces
M.

A dessertspoonful of this mixture is to be taken every half hour until labor occurs. At the same time two of the following capsules are to be taken every fifteen minutes :

Quinine sulphate, ... 15 grains
Pure caffeine, ... 12 grains.
M.

This quantity will make six capsules. With the employment of these prescriptions labor is hastened and occurs under the best possible conditions. The postpartum hemorrhage becomes less abundant and there is less danger of vascular trouble.

Many writers have testified to the good effects of hydrastis in the different forms of metrorrhagia, recognizing its indisputable and most decided action in uterine hemorrhages. M. Marini maintains that it is the preferable remedy in the hemorrhages of fibromyomas, and that it is the best means of combating the hemorrhages of pregnancy at any stage, provided that it is taken at sufficiently prolonged intervals—that is, twenty drops every three hours, or four times a day.

In conclusion, M. Marini lays down the following principal indications of the drug in question : 1. Hydrastis canadensis administered at any stage during pregnancy, in amounts of from one hundred to two hundred drops a day for several consecutive days, has no dangerous action on the mother of the fetus; it is the same when it is given during

labor. 2. Administered either during pregnancy or during labor and delivery, as well as afterward, it exercises an invariable hemostatic, curative, and prophylactic action on the uterus, without exercising any ecbolic action on the uterine muscle or moderating the contractions. 3. It is a therapeutic substance which is very valuable in obstetric practice, and is certainly superior to ergot of rye; it does not present the inconveniences of the latter, and may be administered freely either as a curative or as a prophylactic in the metrorrhagias in all stages of pregnancy, labor, or delivery, and during the puerperium; it is also a much safer remedy in the hands of midwives than ergot of rye.—"New York Medical Journal."

Vaccination.

The inoculation of disease by vaccination is of such rarity as to be a curiosity, but what may be called the accidents of vaccination, such as diffuse erythema, cellulitis, and even erysipelas, do occasionally occur, and they commonly arise from no fault of the surgeon. The child leaves the surgery or vaccination station with several recent abrasions exposed to the air, and, especially if they are not quite dry, in a favorable condition for the cultivation of bacteria, streptococci, etc. About the sixth day the vesicles are frequently broken, and a fresh opportunity arises for germ introduction. But if strict antiseptic precautions are of untold value in surgical operations, why are they not adopted for vaccination, which is itself a minor operation? There are some little practical difficulties attending the dressing of vaccination wounds, but, after trying a number of different methods, Dr. Leftwich finds the following gives completely satisfactory results. His armamentarium contains the following appliances: Discs of oiled silk kept in absolute alcohol, salicylic wool, perchlorid of mercury gauze, a reel of one-half inch strapping, a one and one-half inch crêpenette bandage, and germicide soap solution.

The arm is first washed and dried. The usual number of scarifications is made over, or a little below, the insertion of the deltoid with a lancet which has been previously held in a spirit flame. The discs are taken out of the spirit with aseptic forceps and dried upon wool. The blood that has oozed is wiped off, the lymph, blown upon the lancet, is spread on the scarifications, and a disc is laid over each. A layer of wool, allowing a good margin, is placed over the discs, a piece of gauze follows, secured by two transverse and one vertical strip of plaster, and the whole is covered with two or three turns of the bandage. At the end of a week the arm is examined, and if necessary pricked. The dressing is then renewed, minus the discs, and is directed to be untouched for another week. With these precautions there is practically a complete guarantee against germ introduction, and also against the application of unsuitable dressings, such as cold water cloths. The additional time required is slight, and there is no tedious—and perhaps dangerous—waiting for the abrasions to dry.

It is not suggested that the superiority of the aseptic method is proved. It would take many thousands of cases to do this. But it is

claimed that a prima facie case has been made out for its more general adoption. Lymph can now be obtained which is not distributed until the calf has been demonstrated to have been healthy by a necropsy, and, coupled with the use of such lymph, the above method probably renders vaccination at least as safe as the operations of the hairdresser.—" British Medical Journal."

The Treatment of Ileus in Children.

Wiggin (" Memorablien," 1897, xv., 421) does not believe the opinion entertained by many physicians that clysters of water or air can cure a case of ileus is justified, basing his statement on 103 cases treated by himself. Of 39 cases in which the treatment was confined to clysmata of water or air, or both combined, only 13, that is, 41 per cent., were relieved. Of 64 cases in which laparotomy was performed, a cure was effected only in 21, or 32.8 per cent. ; among these cases, however, are included all those in which resection or incision of the gut was imperative, after too great a delay. After eliminating all cases in which surgical interference was absolutely necessary, and an antiseptic treatment could be carried out, Wiggin obtained 14 cures in 18 cases of ileus, which were operated on early, that is, 77.7 per cent. Should we determine to employ clysters, one and a half liters of a warm salt solution may be passed into the bowel, holding the water-bag at least one meter above the patient ; if one irrigation does not prove successful, immediate laparotomy is indicated.—" Pediatrics."

Cold Baths.

The need of dogmatic medical guidance to the average medical man is nowhere more evident than in the manner of the cold bath. Some men there are who bathe in the open, year in and year out, and many more who every morning plunge into cold water under the somewhat tempering shelter of their own roof-tree. For the most part such folk doubtless thrive and remain vigorous, but then it must be borne in mind that only the robust would brave such Spartan discipline. But what has medicine to say on so important a point of every-day life? So far as we know, there is no authoritative and generally accepted dogma on the point. That which braces up the nerve centers and circulation of the strong man might be full of danger to the weakling. So, too, with age; as the elasticity of the arteries decreases with the lapse of years, by just so much increases the risk of a sudden strain upon the capacity of the blood-distributing system. Out of all the tangle of nescience upon this subject, one or two solid facts, or what appear to be such, rear their stubborn heads. For instance, who will gainsay the dictum that the chief test of fitness for the cold bath is the individual power of establishing reaction; in other words, of getting the delightful after-glow and warmth of the skin that should follow a vigorous " toweling." Secondly, many people who seldom or never take a bath are, like our ancestors, healthy and long-lived.

In spite of that negative evidence, however, we would advise a morning tub to all our readers; cold for those who can stand it, tepid for weaker and less resolute brethren, and warm for the aged. But even this general indication must be carefully modified to suit particular cases. The wise citizen will consult his medical adviser upon this weighty matter of daily routine.—"Medical Press and Circular."

The Management of Patients Before and After Laparotomy.

Wiggin concludes his paper on this subject as follows, calling attention to the points which he considers important, though usually classed as minor ones :

1. The importance, whenever practicable, of prolonged preparatory treatment of patients about to undergo an abdominal operation.

2. The importance of the administration of cathartics in the early part of this period, followed by large enemas for the purpose of cleansing the intestinal tract.

3. The importance of keeping a record of the body temperature, respirations and pulse-rate for several days in advance of the operation, and of making a final examination of the urine.

4. The necessity in female of arranging to have the operation performed a few days after the menstrual period, and the cleansing of the vagina, even when it is intended that the operation shall be by the abdominal route only.

5. The administration of a small quantity of peptonized food (one ounce) containing stimulants two hours before giving the anesthetic, for the purpose of lessening the tendency to nausea and vomiting after the recovery of consciousness.

6. The necessity of the anesthetic being given by an experienced physician, and in the smallest possible quantity.

7. The necessity of protecting the patient's body properly with clothing and blankets during the operation.

8. The advantage of stimulating the pulse before the heart has become much exhausted, and of using intravenous saline injections before the radial pulse has become extinct.

9. The leaving in the abdominal cavity after free irrigation of a quantity of hot saline solution, for the purpose of stimulating the patient, preventing (?) the formation of intestinal adhesions, and lessening the danger of septic infection of the peritoneum.

10. The necessity of making the patient comfortable by change of position during the first two days of convalescence, and by the use of the rectal tube.

11. The necessity for the early administration of food in reasonable quantities and at proper intervals.

12. The necessity of withholding stimulating enemata after operations in which extensive and firm pelvic adhesions have been broken up.

13. The necessity for deliberation as to the wisdom of re-opening the peritoneal cavity in a given case of supposed concealed hemorrhage.

14. The importance of washing out the stomach as soon as the diagnosis of intestinal paresis is made, and of the persistent use of saline cathartics till the bowels move.

15. The importance of not administering cathartics to those convalescing from abdominal operations, and who are pursuing a normal course, too early or in too large doses.—"Medical Record."

The Treatment of Tetanus.

Heddæus, of Czerny's Clinic ("Münch. med. Woch.," March 29th, 1898) relates a case of tetanus of moderate severity secondary to a wound of the arm. Here local spasm in the arm preceded trismus and general spasm. The serum treatment appeared to be of service in this case. The author then gives details of two typical and very severe cases of cephalic tetanus both treated with Behring's serum. The first patient was aged 45 years, and the trismus appeared on the fourth day. The wound of the face was so extensive as to make it almost impossible to say when the facial paralysis commenced. The serum was injected into the veins of the arm on the fourth day, and was repeated five days later, when an exacerbation in the symptoms occurred. Heddæus believes that there is evidence to show that in this very severe case the early injection of the serum was the means of saving the patient's life. In the second case, of a man aged 28, the wound in the face was insignificant. In five days the first symptoms developed. On the sixth day the site of the wound was thoroughly excised and 5 per cent. carbolic acid applied. The tetanus antitoxin was injected on the following day, also into the veins of the arm. The patient died on the following day. This case belonged to the severest, the symptoms developing with great rapidity. Summarizing the results in these three cases the author says that in the first case improvement did not follow immediately upon the injection, but only after some hours. In the second case there was an arrest of the symptoms after the injection, and then improvement. Later the patient became much worse, but subsequently recovered. Between the first and second injections the wound was well cleaned. In the third case there was a short lull in the disease after the injection, but then the patient became worse and died. Here the serum was used too late and in too small quantities, so that this case is rightly excluded in estimating the value of the serum treatment. Heddæus says that so far, he has reason to be satisfied with the results of this treatment. With the exception of one case treated with opium, all the twelve cases treated during the past twenty years in the clinic have died. The following conclusions are drawn : (1) Behring's tetanus antitoxin is an efficacious remedy of a specific character, and should be used at the earliest possible moment. (2) The earliest destruction of the infected area must not be omitted, as from it a permanent supply of toxin is provided. (3) The symptomatic treatment with sedatives, including narcotics, should go hand in hand with the serum treatment. (4) Other means of eliminating the tetanus poison should not be neglected. (5) Preventive serum treatment deserves further consideration.—"British Medical Journal."

Treatment of Infantile Paralyses.

Eulenberg ("Deut. med. Woch.," April 7th, 1898) discusses the value of tendon transplantation in these paralyses, and relates a case of spastic paralysis in which it was successfully performed. In anterior poliomyelitis there is frequently a rapid atrophy of some muscles, followed by contracture in their antagonists, which leads to various deformities of the foot. Electricity and gymnastic treatment are almost useless to evercome these deformities, and hence a mechanical orthopedic treatment has to be adopted. The object of the new procedure of tendon or muscle transplantation is to render the paralyzed muscles capable of voluntary movement. The tendon of the muscle to be transplanted is split lengthwise, and is united with the tendon of the paralyzed muscle. In paralytic pes equino-varus where the extensor communis digitorum and peronei are affected, transplantation is made from the gastrocnemius, tibialis anticus, and occasionally from the extensor longus pollicis. A portion of the gastrocnemius has thus been united with the peroneus longus and a portion of the tibialis anticus with the extensor communis digitorum. These procedures have been carried out with very good results by several surgeons in the case of the lower extremity, but as yet with very little effect in the case of the arm. In cerebral spastic paralysis definite muscles or groups of muscles with the same function are mostly affected by spasm, whereas the antagonists are by no means devoid of function. Thus Eulenberg adopted tendon transplantation in a case of spastic paraplegia in a child aged 3. A portion of the tendo Achillis with the attached soleus was implanted by Sonnenberg into the united tendons of the peronei, and the foot was put up in plaster. After a fortnight faradic stimulation of the tibial nerve produced pronation with a raising of the outer side of the foot. A month later a similar procedure was carried out on the opposite side. All spasm disappeared, and the child could place its feet on the ground extremely well. In paralytic deformities of the foot this transplantation has been done with success, and Eulenberg thinks that it should be of equal service in spastic deformities. He is also of opinion that it may be of value in partial paralyses left after cerebral apoplexy, in some old paralyses of peripheral origin, etc.—"British Medical Journal."

Neurasthenia.—

The following prescription has been useful in the treatment of some of the cases of neurasthenia seen in Dr. Spiller's clinic:

Tincture of nux vomica	10 minims.
Sodium bromid	10 grains.
Compound tincture of cardamom sufficient to make	1 fluidram.

Mix.

Directions.—One dose to be given three times daily in a wineglassful of water after meals.

—*Philadelphia Polyclinic.*

For the Relief of Painful Affections of the Bladder, Prostate, or Urethra, the following have proved efficacious :

Morphin hydrochlor . . . . . gr. ij ;
Atrophin sulph., ... gr. $\frac{1}{6}$;
Aq. dest., ... ℥ iij.

M. Sig.: From 30 to 80 drops should be injected into the rectum.

In addition should fever be present, the following is advised :

Cocaine, ... gr. xiv ;
Antipyrin } aa, ... ℥ iiss ;
Sod. salicyl, }
Aq. dest., ... ℥ iij.

M. Sig.: Inject 80 drops per rectum three times daily.

—*American Practitioner and News.*

Arsenic in the Treatment of Asthma.

Dr. William Murray ("Medical Chronicle") says the following prescription has achieved the happiest results in spasmodic asthma :

Rx Tinct. stramonium. . . . . ʒij.
Ammom. carb. . . . . ʒi.
Sodium bicarb. . . . . ʒiij.
Magnesium carb . . . . . ℥j.
Powd. rhubarb. . . . . gr. xx.
Chloroform. . . . . M xx.
Aq. peppermint, q. s. to make . ℥viij.

M. Sig. Half an ounce to be taken three times a day with an ounce of water.

"Having thus secured a temporary lull in the complaint." says the author, "the patient must be put on a course of arsenic, care being taken to give just as much as the stomach will bear. A good plan is to give Fowler's solution—five drops—with breakfast and dinner, and maintain the corrective dose with stramonium at night."

Artificial Serum in Toxemia.

There is a steadily growing body of testimony as to the value of subcutaneous injections of artificial serum in eclampsia and all cases of toxemia. The best fluid for injection seems to be a modification of Ringer's fluid as advised by Edes ("Boston Medical and Surgical Journal," March 4th, 1897). It consists of :

Calcium chloride ..... 0.1 gram.
Potassium chloride ..... 0.75 gram.
Normal salt solution ..... 1.000 c.cm.
(.75 per cent. solution.)

The fluid should be injected slowly into the cellular tissue, not into a vein. Absorption from the cellular tissue is very rapid, and the injection is not accompanied with the same danger as in direct injection into the vein. The method is worthy of a wide trial in toxemia and especially in uremia, and seems to offer a chance of recovery to many almost inevitably fatal cases.

INTERNATIONAL MEDICAL MAGAZINE

An Illustrated Monthly of Medical and Surgical Science.

Edited by
WALTER L. PYLE, A. M. M. D.

Contributions of original articles, clinical memoranda, and other matter of interest to the Medical Profession, are solicited from all parts of the world. Illustrated papers are especially desired. Extensive communications must be type-written. Contributors will be furnished with a liberal number of covered reprints as compensation, provided a request for same accompanies their manuscript.

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PHILADELPHIA, JUNE, 1898.

The American Academy of Medicine.

This society has just completed most successfully its twenty-third year in its session at Denver. The Secretary offered encouraging reports of membership, attendance, papers and finances. There were 708 names on the rolls at the beginning of the the meeting, and sixty new fellows were elected. All the papers were of the uniformly high standard of past years, and there was everywhere prevalent the same energetic spirit of unselfish devotion to the Academy's purpose—the betterment of the medical profession. Such carefully prepared papers and discussions before a limited and unadvertised audience like that of the Academy are prompted by true philanthrophy, and not by a selfish desire for publicity. There is such a sterling ring to the proceedings of this body that we do not wonder at the great amount of good done at each annual session.

The American Academy of Medicine was organized in 1876 with a view of protesting against the imperfect educational methods in medical colleges, made worse by careless administration, until the profession as a class were threatened with demoralization. It emphasized its protest by making the degree in arts, or its equivalent, an essential qualification for membership. In the earlier years the preliminary education of the in-

tending physician was its chief topic, but later the changes wrought in the whole system of medical education have been so great that the Academy no longer felt the need of limiting itself to the scholastic and technical education of physicians, but entered the wide field of medical sociology, and all problems concerning the physician in any relation he might bear to his fellows or to society are now discussed at the meetings. Each year in addition to the general papers, communications on a special topic of interest are invited. This year the special subject was, "The Physiological Aspect of the Education of Youth," and many valuable and interesting papers were read, and the discussions brought forth every phase of the subject. The report of the proceedings published in the Bulletin of the Academy should be in the hands of every broad-minded physician.

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Science Versus The Classics.

The subject of education is of no less importance to the physician than to the parent and teacher. It is no uncommon thing for a medical man to be asked for advice relative to the best kind and the proper amount of mental training for children of his patients, and particularly is this so as the children advance to high schools and colleges where the mental strain begins to be manifest. There has been an outcry from physicians everywhere against the systems of cramming and memory-taxing now so much in vogue. Many a girl blossoming into womanhood has become a nervous bankrupt to gratify the ambitious desire of her parents and friends. Her health is broken and instead of acquiring knowledge or even the means and methods of learning, she has worn out her brain in word-memorizing, and only secured "an honor" (a very empty one) in her class. The energy of an intelligent child, encouraged by its over-anxious parents, will ever carry it beyond its capacities, in the competition of the class-room. This evil cannot be corrected, but the methods of education can and must be improved.

The methods of the kindergarten have revolutionized the primitive training, and the same ideas should be pursued throughout the educational course. The advantages of special sense training over verbal memorizing are enormous. Education is a process of leading out, not putting in. True education is derived through cultivated special senses, and to this end all methods of education should tend.

An important point in this connection is the advantage of an advanced natural history or scientific course, in which the special senses are trained at every step, over a purely classical education. In a paper published in this number of the INTERNATIONAL, Dr. Thomas C. Ely, of Philadelphia, has thoroughly and ably discussed this subject, and as it is of such interest and importance, particularly to medical practitioners and medical educators, we recommend Dr. Ely's paper to our readers for a careful perusal.

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The Naval Ambulance-ship "Solace."

The United States Government has the honor to be the first to commission an ambulance-ship. With the modern destructive power of the weapons of naval warfare, extra facilities for caring for the wounded have become necessary, while at the same time the additional space and structural changes required by the new armament render these facilities more and more inadequate. Hence the proper treatment of the wounded on a battleship is becoming well-nigh impossible. As a solution to this problem the naval authorities have given Surgeon-General Van Reypen authority to fit out an ambulance-ship—a vessel absolutely non-combatant, whose sole mission will be to care for the wounded.

The "Solace," a new steel vessel of 3,800 tons displacement, has been secured, and from the descriptions and plans recently published she seems admirably adapted for the purpose. Her mission will be to follow the battleships and remain near them in action, so that as soon as a ship withdraws or the combat closes, she will take off the wounded in her launches, administer any necessary immediate treatment, and convey her patients to the nearest naval hospital. Although the "Solace" will be amply provisioned and has bunker-space for 850 tons of coal and ample store-room for more, the primary intention is to make her an ambulance-ship rather than a floating hospital.

The "Solace" will carry a crew of sixty, including four surgeons, three apothecaries, eight nurses, and five subordinate servants for the sick. She will fly the Red Cross and be painted white, with a green stripe in conformity with the additional articles of the Geneva convention. She has already made a trip from the Squadron in Cuban waters to naval hospitals north, and has fulfilled all expectations; and preparations are being made to commission additional ships of the same nature.

BOOK-REVIEWS.

ATLAS AND ABSTRACT OF THE DISEASES OF THE LARYNX. By Dr. L. Grunwald of Munich. Edited by Charles P. Grayson, M. D., of Philadelphia. Philadelphia. W. B. Saunders, 1898.

The object of this little Atlas, one of Saunders' Medical Hand-Atlases, is to help the beginner in laryngology in the art of observing and interpreting. Each of the 151 illustrations is accompanied by necessray data in the form of a short and suggestive clinical history. To prepare the student for this course in the theory and practice of laryngologic diagnosis, the opening chapters of the book contain a short systematic abstract of the subject. The book exemplifies a happy blending of the didactic and clinical, such as is scarcely to be found in any other volume upon this subject.

ATLAS OF LEGAL MEDICINE. By Dr. B. Von Hofman. Edited by Frederick Peterson, M. D., of New York, assisted by A. O. J. Kelly, M. D., of Philadelphia. Philadelphia. W. B. Saunders. 1898. Price, $3.50 net.

This is one of the handsomest volumes of the Hand-Atlas series. Forensic medicine presents a magnificent field for illustration, and in no other branch is exact illustration of more value. This volume is a veritable mine of information, gathered from the abundant material of the great Medico-Legal Institute of Vienna. The illustrations are entirely original and have been prepared either from recent cases or from museum specimens. Appropriate descriptive text accompanies each of the plates, of which there are fifty-six in colors, and 193 in black. We cannot speak too highly of the scientific merit and the mechanical make-up of the book.

A TREATISE ON APHASIA AND OTHER SPEECH DEFECTS. By H. Charlton Bastian, M. A., M. D. Lond., F. R. S. New York. D. Appleton & Co. 1898.

This work includes, with a few additions, a reproduction of the Lumleian Lectures "On Some Problems in Connection with Aphasia and Other Speech Defects," delivered before the Royal College of Physicians of London in 1897, but the greater part is new material derived from a careful study of the somewhat extensive literature of aphasia, etc., and an extensive clinical experience. Although the work is rather too obstruse for the general practitioner, it is of undoubted merit, and will have an extensive reading.

ANNUAL AND ANALYTICAL CYCLOPÆDIA OF PRACTICAL MEDICINE. By Charles E. de M. Sajous, M. D., and One Hundred Associate Editors. Vol. I. Philadelphia. The F. A. Davis Company. 1898.

The initial volume of the new Sajous' Annual presents a most promising appearance. The old form enjoyed the greatest popularity among writers, teachers, and investigators, but, for several reasons, it did not satisfactorily fulfil its mission among family practitioners, and therefore a new classification and arrangement, which is more useful to the general physician without interfering in the least with its value to the medical author, has been adopted. Instead of presenting as heretofore the excerpts from the year's literature, each disease is described *in extenso*, noting also the new features that have been added to the knowledge of the disease and its treatment during the past year. Thus the work becomes a complete reference text-book of the medical sciences revised each year, whereby its usefulness is largely increased.

The first volume contains 600 pages, and includes all subjects from abdominal

injuries to Bright's disease. All of the articles are well written and are thoroughly recent. Such a praiseworthy effort deserves a large patronage.

The new publication has the alphabetical arrangement, and comprises a concise statement of the generally accepted methods in vogue, in one style of type, while in a different type, on the same page, can be found the opinions of well-known authorities bearing upon whatever may be debatable regarding the subject in hand. This alphabetical arrangement will consider all the practical subjects of medicine and surgery and the clinical application of therapeutics. It will appear at the approximate rate of one volume each six months, the whole alphabet being thus covered in three years, and during this time a monthly supplement (the *Monthly Cyclopædia*), alphabetical from A to Z, will be brought out ; so that a doctor can have a complete synopsis of the latest journal literature to reinforce his system of reference.

An American Text-Book of Genito-Urinary Diseases, Syphilis and Diseases of the Skin. Edited by W. Bolton Bangs, M. D., and W. A. Hardaway, A. M., M. D. Published by W. B. Saunders. Philadelphia. 1898. Cloth, $7.00. Sheep or half morocco, $18.00.

Another American text book has been offered to the medical public. Systems of this kind are possessed of both advantages and disadvantages. It cannot be denied that the apportionment of the various chapters of a work to men who have made specialties within specialties, greatly enhance its scientific worth. Nevertheless, such a volume, of necessity, lacks the readability, coherence of thought and treatment, and individuality possessed by the work of a single author. To the credit of the book under consideration, be it said that its advantages are more pronounced and its disadvantages less than most works of a similar character. The list of eminent men comprised among the contributors is sufficient guarantee to the excellence of the work. Judicious condensation and arrangement have enabled the editors to include within twelve hundred pages, subject matter that ordinarily requires much greater compass. Six hundred pages are devoted to genito-urinary diseases, one hundred and fifty to syphilis and four hundred and fifty to diseases of the skin. The first part is profusely and well illustrated with half-tones, letter press cuts and colored plates. The same cannot be said of the other two parts. It is to be deplored that the money expended in the production of the mediocre plates designed to illustrate syphilis and cutaneous diseases was not devoted to the introduction of numerous good half-tones. The typography of the book is good and clear throughout. The work may be carefully recommended to all practitioners who desire to keep abreast with the advances made in genito-urinary diseases, syphilis and diseases of the skin.

Hay-Fever and Its Successful Treatment. By W. C. Hollopeter, A. M., M. D., of Philadelphia. Professor of Pediatrics in the Medico-Chirurgical College of Philadelphia, etc. P. Blakiston, Son & Co. Philadelphia. 1898. Price, $1.00.

This very excellent little treatise is the outcome of an extensive and successful clinical experience with hay-fever, as well as a patient study of the literature relative to the disease. It is absolutely complete and comprehensive. The whole literature of the subject is intelligently digested and judiciously annotated, and a method of treatment is advised which has been used by author for the past ten years with uniform success in over 200 cases.

He sagely says that beyond the knowledge that there is an external exciting cause and a subjective predisposition, either through local disease or systemic derangement, we cannot go ; and, although quoting briefly the different theories, the

author avoids further speculation and devotes his original communication to the successful treatment. By a combination of deduction and empiricism he arrived at a treatment which is certainly rational and full of common sense. It consists in nothing more or less than systematic thorough sterilization of the nares. Dr. Hollopeter uses the simplest apparatus and solutions, and his methods will be comprehended easily in one reading.

One of the most striking features in the history of hay-fever is that although volumes have been written upon it, and some of the best medical minds for a half century have been occupied with it, no practical advances in the treatment have been made. If the experience of others confirms the statement that by his method of the treatment hay-fever sufferers can avoid their distressing recurrences without change of residence, Dr. Hollopeter will go down in history as a great benefactor of suffering humanity. At all events, the book is so well written, of so much merit and originality, and shows such a complete knowledge of every phase of the subject that it will attract no little attention. As a fitting completion of such a scholarly effort, a full bibliography is appended. The book is well printed in good legible type.

MEDICAL NEWS AND MISCELLANY.

Dr. William Osler, of Johns Hopkins, is to be doubly honored in England this year with fellowship in the Royal Society and the degree of L. L. D. from the University of Aberdeen.

Professor Robert Koch, the distinguished bacteriologist, returned to Berlin on May 20th, after a year and a half at the Cape of Good Hope, where he has been study the diseases of cattle for the English Government.

Dr. Daniel H. Williams, of the Freedman's Hospital, recently removed from the back of a patient, a young white farmer from Maryland, a monster fibrous tumor, said by Dr. Lamb, pathologist of the Army Medical Museum, to be the largest of its kind known to medical science. The tumor was on the small of the back and hung down a foot or more, weighing between 15 and 20 pounds. The tumor was of 7 years' growth. The operation was successful.

Dr. Reider, of Bonn, in response to a request from the Turkish Government has been authorized by the German Emperor to accept the post of Professor of Medicine at Constantinople, at a salary of $6,000 a year. He will be allowed a German assistant, whose salary is to be $3,000. The reorganization of the medical school and the inspection of military hospitals will form part of their duties.

A Gallant "Non-Combatant."—After Surgeon La Monte's admirable conduct on board the "Topeka," how can the idea be entertained that staff officers are non-combatants? We mean, of course, non-combatants in the sense of not exposing themselves to peril. The "Topeka" was forced to pick up hastily a crew in a foreign port. The best she was able to do was to ship a brood of "wharf-rats" of various tints of villainy. They were in a semi-mutinous state all the way to New York. The only naval officers on board were the commonding officer, Lieutenant Knapp, and Surgeon La Monte, and these two gentlemen took turns, night and day, on the bridge. We do not mean to imply that such gallant actions are unusual in the medical corps of the navy; we simply make use of this recent instance to emphasize the fact that they are not. The truth is that nobody on board a man-of-war can properly be called a non-combatant.—*New York Medical Journal.*

Telegony.—This term was proposed by Professor Weismann to denote the cases where the female is so far influenced by the first sire to which she bears offspring that the subsequent offsprings to other sires presents some of the characteristics or peculiarities of the first. Early in the century Lord Morton bred from a chestnut mare a quagga hybrid, and the mare afterward produced to a black Arabian horse a filly and a colt marked like the hybrid. In the *Scottish Medical and Surgical Journal*, Dr. J. C. Ewart takes up the subject from the view point of his of his own original researches. In 1895 Professor Ewart formed a small stud and commenced various crossing experiments between horses and zebras. He now has five zebra mare hybrids, and the dam of a last year hybrid has recently produced to an Arab horse a foal presenting numerous zebra-like stripes over the croup and loins. He enumerates the explanations of this phenomen that have been suggested by Sir Everard Home, Herbert Spencer and Weismann, all of which he thinks are highly improbable.

"The Medicine Man."—In comment on Sir Henry Irving's new play the *Lancet* says :

"Medical men have frequently been presented on the stage and and almost invariably as beneficient agents, but the stage "doctor" who is a villain is something more or less new. Dr. Tregenna, the practitioner in question, is a very clever man and much run after by fashionable people; none the less because he is an unorthodox practitioner, although he does possess a real power over his patients. He has studied the secrets of the brain and exercises his influence by will power mainly, though at times he employs "suggestions" as well. It will easily be imagined what sort of representation Sir Henry Irving gives of such a character. Tregenna is decidedly an uncanny person and selects his patients or victims from all classes of society. In the opening scene we see him in an East-end mission room, where he exercises his influence over costermongers and dock laborers and informs a gentleman of the former calling that he can listen to his brains as well as his heart. Here we might mention, as Sir Henry Irving is always careful about minutiæ, that the small end of a single stethoscope and not the large is the right one to apply to the patient. The finale of the first act is decidedly impressive. One of Tregenna's patient's is a drunken bully named Bill Burge, magnificently played by Mr. Mackintosh. Tregenna is determined to get this animal, "my tiger," as he calls him, into his retreat, but Burge objects and in forcible language goes out into the night. "He will come when I want him," says Tregenna and sits down alone. There is silence in the room, only outside is heard the noise of oaths, screams, and an organ. Tregenna remains motionless and thinking ; presently the door opens and Burge wanders in like a man in a dream. "My

tiger has come back from his jungle, you see,'' says Tregenna, and the curtain falls. The last three acts take place at ''The Retreat,'' where Sylvia Wynford, the daughter of a woman whom Tregenna had loved and whom in revenge on the man who had married her he is resolved to render insane, is a patient, for, as he says, ''the will that can cure a disease can also bring it on.'' So he sets himself to bring about this disease—namely melancholia—from which Sylvia's mother had suffered, and succeeds. Miss Terry is excellent here, as might have been expected from her playing of Ophelia. Bill Burge is also a patient in 'The Retreat,' and under Tregenna's influence has become as meek as a new-born lamb, a change which does not commend itself to his wife, who comes to see him. Mrs. Burge, admirably played by Miss Dolores Drummond, is furious with Tregenna for taking all her husband's spirit out of him, and this is the most realistic scene in the play. The end of the drama is that Tregenna, on learning that Sylvia's father had never heard of him when he married his wife, restores Sylvia's reason to her. Burge suddenly develops homicidal mania and goes for Tregenna with a knife, But the old will power still asserts itself, and 'the tiger' drops his knife. Then, however, Tregrenna makes his fatal mistake. 'Back to your den,' he says, trying to push Burge out. But Burge immediately feels his immeasurable superiority in physicial strength, throws Tregenna on the sofa and slowly strangles him. This scene, with the one exception that Sir Henry Irving omitted the asphyxial convulsions, was startling in its realism. We cannot praise the drama as a play, but Tregenna has a masterly exponent, and should Sir Henry Irving correct the two little errors we have pointed out from a medical point of view, he would make his rendering of an improbable character perfectly perfect.''

Ovid a Neurasthenic.—A recent book in German, published in Vienna, analyzes Ovid's letter to Augustus from his exile in the Caucasus, and points out that the worry of imperial disfavor, the hardships of his life in banishment, and the changeable climate of the shores of the Euxine, so different from his native Italy, had caused the development of that train of symptoms we now know as neurasthenia. Hence the hypochondriac complaints and the unmanly appeals for recall. The book will be likely to restore the poet to the good graces of many who have always found this period of the poet's life so unamiable.—*Philadelphia Medical Journal.*

Snoring Extraordinary.—Whether or not intense snoring constitutes a sanitary nuisance in the legal acceptation of the term was the difficult problem for a decision recently before a magistrate of the Westminster Police Court, London. The substance of the story, as told by the *Gazette médicale*, is as follows :

Miss Jane Ship, a domestic temporarily out of a place, applied for lodging at a small hotel at Queen's Gate, and being of respectable appearance was admitted without further question on the payment of a week's lodging in advance. After an ample meal she retired to her new apartment, and was soon in the arms of gentle Morpheus. In about a half hour the whole house was startled by a terrible noise. The women and children shrieked and those who preserved their *sang-froid* gathered in their valuable belongings ready to leave their quarters. The noise continuing in full force, the landlord started on a tour of investigation. He soon discovered that all the tumult originated in the new tenant's room. He knocked on the door and all sounds ceased. The young woman awakening, voluntarily confessed her infirmity and in tears told that by reason of it she could never remain in service anywhere longer than the customary week. The unsympathetic proprietor ordered her to leave the house at once ; but as she had paid for a week in advance she refused to go. A policeman was called, and refused to interfere on the complaint offered. The landlord seeing his tenants preparing to desert him, appealed to the neighboring magistrate. This functionary was greatly perplexed as to what course he could legally pursue to help the proprietor. He first considered the advisability of finding an expert on snoring, and have him spend a night in the hotel and report, but finally decided to give a judicial opinion on the testimony offered. This latter was most amusing, one of the witnesses, a respected clergyman, actually comparing the snoring of the buxom Jane to the trumpet-sound on Judgment Day—enough to wake the dead. The magistrate concluded that Miss Ship could be legally evicted on the restoration of her week's payment, and thereby increased ten-fold his popularity in the neighborhood. We refer the story to the rhinologists for further discussion.

New Diagnostic Sign of Measles.—In the *Medical Record*, April 9, Koplik describes in detail a phenomenon previously claimed by him to be a new diagnostic sign of measles. This sign is an eruption which appears on the mucous membrane of the cheek and lips fully twenty-four hours, often forty-eight or seventy-two, before the eruption of the skin. It spreads and reaches its height just as the skin eruption has appeared and is spreading ; it then fades. The eruption consists of small irregular spots of a bright red color ; in the center of each spot is the interesting sign, seen only by strong daylight, a most minute bluish white speck in the center of the reddish spot. They are not so large nor so deeply white as spruce and they are not seen on the hard or soft palate nor after the mouth has been washed. They always maintain their punctate character and do not coalesce. To be seen, it is necessary to evert the mucous membrane covering the lips and cheeks, either with the fingers or a spatula. " One can then see the infinitesimally minute

bluish white specks on a reddish punctate area in beginning measles, and on a more diffuse reddened background in advanced cases, which are absolutely pathognomic of measles."

Striking Instance of Maternal Impression.—Gardiner (*Amer. Jour. of Obstet.*, February, 1898,) gives an instance of maternal impression which is no less striking than it is well-authenticated. An American woman had, during her third pregnancy, an unbearable craving for sunfish. During the fourth month her husband brought home for her some of these fish alive in a pail. She stumbled against it on the porch, and one of the fish flopped over the edge of the pail and came in contact with her leg. It sent a cold chill through her, but the pregnancy was not disturbed, and nothing more was thought of the accident until the child was born, when, to her surprise, a nevus in shape and size closely resembling a fish was seen upon the leg of the baby in the part corresponding to that of her own leg with which the fish came in contact. Otherwise the child's health was perfect, and she lived to grow up into a healthy woman. The annoying craving for sunfish which was temporarily present in her mother existed in her throughout a long life. It much resembled a drug habit. Time and again she has eaten sunfish until from repletion she has vomited, and then again has eaten them with unabated appetite.—*Medical News.*

Early Pregnancy.—Dr. Sage, of Bordeaux, recently delivered by means of forceps a girl, aged thirteen years and six months, of a male child at term weighing 8¼ pounds. The mother seems to have become pregnant a month after her first menstrual period. There was nothing abnormal regarding the puerperium. This has led Dr. Sage to look up the subject of early pregnancy, which are less common in France than in other European countries. He has been unable to find any mention of a case occurring at so early an age as his own in recent medical literature, the earliest being at the age of fourteen years and one month. In a medical dictionary published in 1823 mention is made of girls having been received into the Paris lying-in hospitals at thirteen years of age. The earliest cases recorded in other countries are Molitor's case in Luxemburg, where a child, aged eight years and three months, became pregnant and was delivered of a male containing a dead fœtus seven months afterwards (this was in 1877); Nutrepont's case (1825) of a German girl, aged nine years, who aborted in her fourth month; Haller's case in Switzerland of a girl born in 1751 and delivered in 1759; and Dodd's case in England (1881) where a Yorkshire girl, aged nine years and eight months, was delivered of a living child at term. Here the young mother had menstruated from twelve months of age. In Neale's Digest a reference is given to another case at eight years.—*Lancet.*

The Effect of the Explosion of a Shell.—During the bombardment of San Juan de Puerto Rico on May 12th, the U. S. S. "New York" was struck once by a 14 cm. shell at a distance of about 5,500 yards. The shell came over the stern of the ship and struck an iron stanchion three inches in thickness which was broken short off at the point of contact. The shell went on for a distance of about fifteen feet and exploded in a wooden boat which was covered with canvas. The boat was demolished, the lighter planking being badly splintered and driven downward and forward against an iron steamwinch. The oars in the boat were broken and one piece was driven forward along the spar deck, but did no damage. The canvas covering the boat was torn and rent into shreds by the force of the explosion and by splinters passing through it, and then caught fire, showing that canvas under such conditions will not stop splinters.

The shell itself burst into many pieces, varying from the size of a pea to large pieces weighing about five pounds. The direction these fragments took was forward, downward, upward, and to both sides, many of them going over the ship's side, others passing through the copper ventilators and smoke-pipes and doing but little damage.

The fragments that went downward and forward struck about the port 8-inch gun, where there were twelve men stationed, killing one man and injuring several others. The man killed, Wiedemark, was struck by a piece of shell about two inches square by one inch thick. It entered the left side of his neck near the angle of the jaw, severed the blood-vessels, proceeded upward and backward into his brain, probably injuring the medulla, and lodged under the skin just beneath the occipital protuberance. The man fell forward, losing consciousness immediately. His respiration ceased as soon as he was struck, but his heart continued to beat feebly for about five minutes, when all signs of life disappeared.

Another fragment of shell of about the same size struck a man named Fettman on the anterior inner surface of the left thigh, about three inches above the knee and went through the limb, taking a backward and downward course, The femur was shattered into numerous fragments and the muscles were torn considerably in the track of the wound. The effect of the missile on the bone was peculiar in that the bone was not only splintered for about three inches of its length, but it was also pulverized, hundreds of minute pieces of bone being imbedded in the muscles. The wound of entrance was smaller than the wound of exit, the piece of shell probably entering the thigh edgewise, turning and presenting a flat surface at the points of exit. At this point there were shreds of tissue protruding from the wound, showing that the ragged piece of steel drew muscular fibers and fascia along with it. The leg was operated on and a portion of the femur resected, the splinters

and crumbs of bones were removed, the fragments were trimmed off and wired together, and through-and-through drainage established, the limb being put up in a fenestrated plaster-dressing. The man was transferred to the hospital ship "Solace" two days after the operation, and is now in the hospital at Key West. The wound at last accounts was healing by primary union, and there is every reason to believe that the leg will be saved.

Another man was struck in the left leg by a piece of shell about 1 in. x ¼ in. x ¼ in. It entered the leg about its middle on the outer side, went inward and forward, grooving the anterior surface of the tibia. The fragments of bone were taken out of the leg by the piece of shell.

There were several other minor injuries. Pieces of shell struck several men, but did no damage. One man felt something hot on his breast and investigating found a small piece of shell that had burned its way through his clothing and reached his skin. There were a few contusions due to flying splinters, but no serious injury from this source. The fragments of the shell were all hot, as was shown by burnt wood and canvas. The men injured by the shell all said they felt a burning, stinging sensation about their wounds, and in some cases the clothing was scorched.

The shell receives a great deal of heat from the friction it incurs in leaving the gun ; some of this heat is lost through radiation in its flight through the air, more heat is developed on the impact of the shell, and still more energy takes the form of heat when the missile explodes, making the fragments hot enough to set fire to wood. All of the wounds made by the pieces of shell were aseptic, but they all were sluggish in healing, due to the lowered vitality and burning of the injured parts.— *Medical News.*

Anesthetics. — Ether was used in the Poli-Klinik des Alten. allfem. Kraukenhauses zu Hamburg, from November, 1893 to August, 1895, and during that time 664 cases were etherized. In all cases Jalliard's inhaler were used, and the mode of administration was as follows; 10 c.c. were poured upon the mask and it was then tightly placed over the nose and mouth; in about half a minute more ether was poured upon it and repeated at short intervals, about 30 c.c. being used at a time. The stage of excitement, which lasted from 2 to 5 minutes, was soon overcome by adding the ether quickly and covering the inhaler with a towel, but not tight enough to smother the patient. From time to time during the anesthesia from 10 to 20 c.c. were added. The after effects were about the same as chloroform except that in ether the patient was more hilarious. In most instances the ether was taken without any anxiety as to the safety of the patient, although in several cases mucus collecting in the mouth gave some

trouble; this disagreeable complication may be easily obviated by changing the position of the head, keeping it low and the chest high. The quantity used could be reduced as one became skilled in its administration. Cases suffering from bronchitis, phthisis and emphysema were only given ether in the beginning, until well under the influence, when it was changed to chloroform. In children and patients suffering from arterioschlerosis, or where the operation was upon the face, only chloroform was used.

True Graditude.—The following recently appeared among the obituary notices of the *Dublin Independent;*

"SMIT.—On the 28th inst., Amy Jane Mary Smit, eldest daughter of John and Wilhelmina Smit, aged one day, two and one-half hours.

"The bereaved and heart broken parents beg to tender their hearty thanks to Dr. Jones for his unremitting attention during the illness of deceased, and for the moderate brevity of his bill. Also to Mr. Wilson for running for the doctor, and to Mr. Robinson for recommending mustard plaster."—*Medical Record.*

The Anatomy of the Drawing-Room.—Not long ago an officer died at a certain British military station. At an afternoon "at home" of one of the leading ladies on the station, the captain's death was mentioned, and the hostess who knew all about it, volunteered the information that he had died of disease of the kidneys, adding, with some unction and a little bashfulness, "how thankful we women ought to be that we have no kidneys."—*Medical Record.*

Taken too Literally:-

"Has your measles gone, Bessie? shouted a little friend to the tot who was looking wistfully from the window.

"Yes; they's left. I heard the doctor tell mamma that they broked out last."—*Detroit Free Press.*

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ORIGINAL COMMUNICATIONS.

NEPHROLITHIASIS; ITS PATHOLOGY AND TREATMENT.[1]

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HARDLY more than twenty years ago, a new field opened itself to surgeons, a field which up to that time had been regarded as practically out of the surgeon's reach. Renal surgery, and more particularly nephrectomy was by chance demonstrated to be a possibility and has now acquired a solid position in surgical therapeutics, although in 1622 it was upheld by Jacques Cousinot and again in 1754 by Borden, that the kidney might be opened for stone.

The first two nephrectomies that were reported, were published in the years 1861 and 1868. Walcot and Peaslee, seven years later, removed the kidney by a mistaken diagnosis. Both surgeons were far from dreaming that they were dealing with tumors of the renal gland.

Walcot made the diagnosis of an hepatic cyst in his case, while Peaslee diagnosticated an ovarian cyst. In the former's case, a tumor weighing two and a-half pounds was removed and which proved to be an encephaloid carcinoma of the kidney; in Peaslee's case the mass removed was a renal growth. Both patients died.

Extirpation of the kidney was first deliberately undertaken by Simon of Heidelberg in 1871, but before carrying out the operation in man he performed numerous experiments on rabbits and was able to convince himself that the removal of one kidney would not interfere with the general

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health of the subject, because the remaining organ would fulfill the functions of the extirpated organ.

It was known of course, that by a gradual decrease in the physiological action of one kidney, the compensatory hypertrophy of the normal renal gland would result in an increase of work and thus an equilibrium in the excretion of urine would be restored, but what would occur if one kidney was removed was entirely unknown. By Simon's experiments all fear regarding this question was done away with, because the animals, although greatly weakened by the operation, showed no symptoms of uremia.

An indication for nephrectomy was given to Simon in the case of a woman of forty-six years, who had a urethral fistula opening through the abdominal wall and which had resisted all attempts at closure. The operation was performed through a lumbar incision, thus avoiding exposure of the peritoneal cavity. The result was most successful, the patient regaining perfect health.

Since this time a large number of nephrectomies and nephrotomies have been successfully performed on account of the introduction of antisepsis and a simplified operative technique, and more especially, perhaps, because we have now a far greater certainty of diagnosis and more precise knowledge of the indications for these operations.

As early as 1880, Gross collected 72 nephrectomies with a mortality of 43.9% and 93 nephrotomies with 71 complete recoveries. Five years later the same author was able to compile 223 nephrectomies of which 87 were fatal, a mortality of 44.6%, and he proved that, according to these statistics, the lumbar incision was far safer than the transperitoneal route.

In 1886 Brodeur published a large volume on renal surgery in which he collected the results of nephrectomy and nephrotomy in 327 cases. Of 138 cases of nephrolithiasis and pyelonephritis of various origin, 78 recovered. The mortality of the nephrectomies was 44%, that of nephrotomy only 33%. In 32 cases of hydronephrosis operated on, ten died; those treated by nephrectomy had a mortality of 40%, while in nephrotomy mortality was nil.

The above figures prove the very great increase and improvements made in the domain of renal surgery. Now, although the indications for nephrectomy were considerably increased on account of more perfect technique of the operation, it also was thought that a less radical operation might be performed on an organ having the great physiological functions of secretion of urine and that nephrectomy should only be done on patients presenting very urgent symptoms. That such ideas were justified can be, we think, demonstrated by the following table published by E. Otis in 1888. Of 441 that he collected, we find:

261 nephrectomies, mortality	= 42.4%
42 nephrolithotomies, mortality	= 9.5%
116 nephrotomies, mortality	= 22.28%
22 nephrorrhaphies, mortality,	= 4.54%

Brodeur, in the book referred to, also published the histories of removal of the kidney in 18 cases of tuberculosis, 12 cases of carcinoma, 29 cases of sarcoma, 10 cases of fibroma and 36 cases of movable kidney, and which give a respective mortality of 56%, 52%, 80% and 50%.

Dr. David Newman, in his Lectures on Surgical Diseases of the Kidney, a work well worth reading by every practitioner interested in renal diseases, although published some ten years ago, presents very valuable statistics relating to operative treatment of renal calculi, complicated or uncomplicated, by pyelonephrosis. Of 42 operations for renal calculi uncomplicated by any suppurative process in the kidney *every patient recovered.* On the other hand, of 60 cases of renal calculi complicated with suppuration, Newman states that in 53 the lumbar operation was done, 31 being females with 10 deaths, 20 males with 10 deaths, and two sex not stated, with one death. In six the abdominal route was followed, 15 females with 4 deaths, one male with a fatal result, and in one case the combined abdominal and lumbar incision was resorted to with a successful result. At the present time, according to Leguen, incision followed by suture of the kidney in uncomplicated nephrolithiasis, has only a mortality of 5%.

The importance of an exact diagnosis before attempting extirpation of the kidney is most important in the majority of cases. It is very necessary to know if one or both urinary glands are diseased, as well as to ascertain if the patient has two kidneys, for cases have been reported of patients dying after nephrectomy and a necropsy demonstrated that the operator had removed the only kidney to which the patient was heir.

In 1875 Simon dilated the urethra and catheterized the ureters under the guidance of the fingers introduced into the bladder. In 1884 Emmet incised the vesico-vaginal septum and exposed the urethral orifices through the fistula, but this method could not become general on account of the inconvenience of a vesico-vaginal fistula.

In 1881 Pawlick introduced the urethral catheters without dilatation of the urethra. He introduced about 200 cc. of water into the bladder with the patient in the knee-chest position. By this means he was able to locate the trigonum vesicæ and introduced the catheter into the urethral orifices quite easily. Of course the above methods are only applicable in the female, but since Pawlick introduced his method many are the improvements made, so that to-day the technique is quite simple in both male and female patients and it requires only some practice and patience on the part of the surgeon in order to become expert in this diagnostic procedure. Within the last few months Kelly has demonstrated that his instruments can be applied to the male.

As regards the surgical therapeutics of renal diseases there has also been undoubted advance made. The conservative aims in renal surgery are becoming more and more marked and the majority of surgeons are endeavoring to substitute nephrectomy for other less radical operations, and in this direction especially, attempts are being made to limit the removal to only such parts of the kidney as are the seat of some lesion.

Tuffier has proved, supported by numerous experiments, that one to one and one-half grammes of secreting renal parenchyma per kilogram of the weight of a person are required for perfect health. Now, calculating the weight of a person of 70 kil. we find that only from 80 to 100 grams of kidney parenchyma are necessary to assume a normal standard in that person and which practically represents only about one-third the amount of renal parenchyma normally possessed by the subjects. The practical conclusion which may be made is that it is quite within the limits of possibility to remove large portions of a kidney while the remaining parenchyma will fulfil the requisite functions.

We consequently can remove part of a kidney, and not extirpate the entire organ and still leave the kidney tissue in good functional condition, and this fact has certainly its importance, especially in those cases in which we are not completely informed as to the functional activity of the fellow organs and it has been asserted that, after extirpation of one, portions of the remaining kidney could still be removed with safety.

Putting his experimental work to practice, Tuffier removed a cyst the size of a lemon, situated at the upper end of the kidney, in a patient of sixty-four years, with excellent result. Many other successful partial resections of the kidney for divers lesions have been reported by Czerny, Bocin, Kummell, von Barslenhauer and others.

The technique of the various operations on the renal gland is a much discussed point. As regards nephrectomy we have to consider the much vexed question of the extraperitoneal versus the transperitoneal operation. Although much has been said in favor of the latter method, which has been more especially proved by gynecologists, it none the less appears to us that the extraperitoneal operation is far superior.

Quite recently von Faure tried to reduce the still higher mortality of nephrectomy by a two-stage operative treatment. From numerous well-conducted experiments on rabbits, he comes to the following conclusions: (1) The ordinary nephrectomy in rabbits gives a mortality of 66%; (2) ligature of the renal veins gives a mortality of 43%; (3) unilateral ligaturing of the same, mortality 12%; (4) after unilateral ligature, a nephrectomy can be performed on the animal with greater success; (5) this nephrectomy in two stages gives a mortality in rabbits of only 12%; (6) the cause of death of the animals was an infectious nephritis which occurred shortly after the operation, sometimes within two hours; (7) this infection of the blood often occurs in man as well as in the rabbit; (8) the cause of the difference in the mortality between the two methods of performing nephrectomy lies in the fact that in nephrectomy in one séance, the remaining kidney is obliged to develop so as to compensate for the loss of its fellow, and this does not always take place with sufficient rapidity, while in nephrectomy in two séances this functional hypertrophy does occur in the space of two weeks.

In a later article von Faure again discusses the advantages of the

method recommended by him and especially insists on the fact that one of the principal dangers of nephrectomy in one séance is the occurrence of a parenchymatous nephritis developing after the operation.

This nephritis is caused by the insufficient secretive power of the remaining gland which is unable to carry off from the economy the toxins and bacteria circulating in the blood. But if one kidney is gradually rendered inactive by cutting off its blood supply, a nephritis will rarely develop in the other organ when its fellow is removed.

Having made these introductory remarks let us now consider the question of nephrolithiasis, which to-day is surgically treated with such success. The first element to be considered in the pathology of nephrolithiasis is the formation of the stones and which are composed of uric acid or its salts in about 80% of cases.

Renal concretions found at autopsy of newly-born children [1] and which are described as uric acid infarcts, as seen protruding in the medullary substance in white or yellowish lines and consist chiefly of urate of sodium or ammonium.

In a medico-legal point of view they are most important because, as a rule, they prove, according to Virchow, that the child has breathed and lived after delivery.

In the adult excessive uric acid secretion is very often met with in those afflicted with a uric acid diathesis, in which condition an excess in the production of uric acid occurs. This secretion makes up gravel and calculi and consists partly of rhomboidal shaped crystals and partly amorphous, rosy colored precipitate of urate of potassium or sodium, while urate of ammonia crystals resemble a thorn-apple.

The conditions for crystallization of uric acid are due to the alkaline state resulting from the splitting up of the acidity of the renal secretions.

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[1] It may not be out of place here to say a few words regarding this rather obscure chapter in the pathology of nursing babies. Few physicians are aware of the really frequent presence of gravel or uric acid calculi in the calices, pelvis, ureters or bladder of sick babies.

This early renal lithiasis may result in a complete or incomplete obstruction of the ureters, retention of the urine, hydronephrosis, dysuria, pyelitis and pyelonephritis.

Du Camp reports that out of 170 necropsies performed at the Hôpital des Enfants Malades, forty showed a nephrolithiasis in various degrees of development and he believes that it is due to a bad condition of the general nutrition rather than to a hereditary diathesis. Children who present a nephrolithiasis are not well, are poorly nourished and undeveloped and are usually the victims of the nursing bottle or of artificial feeding. They have diarrhœa, vomiting or broncho-pneumonia and are thin, atrophied and athrepsic.

Repeated indigestion from which they suffer and loss of liquid from the diarrhœa is manifest by a concentrated urine, which is hyperacid and passed in small and in frequent amounts. For this reason the salts become deposited in Bellini's canals as well as the excretory passages.

It is not very probable that this nephrolithiasis disappears in those children who grow up and the concretions very likely become lodged in the renal pelvis or bladder and thus become a focus for the formation of true calculi which occur in childhood or even in adult life.

Renal calculi are often formed from gravel. They are usually round, ellipsoidal or bean-shaped, and may fill the entire renal pelvis or they may form coral-like masses which give a true cast of the calices and pelvis. They are characterized by their hardness, very smooth surface and a yellowish red or brownish color.

Second in frequency we have the oxalate of lime calculus. These stones are the hardest met with in the kidneys, having a rough, uneven surface and varying in color from a greenish brown to almost black. The phosphate of lime calculi are distinguished from the former by a lighter color, a smooth or only slightly irregular surface and which do not contain uric acid. Calculi composed of phosphate of ammonia or magnesia always present a rough surface and act as secondary deposits for uric acid and oxalate of lime.

An extremely infrequent type of calculus are those composed of carbonate of lime and, as curiosities, we would recall to mind cystin, xanthin and indigo calculi.

The pathological signification of renal concretions, whether located in the pelvis or parenchyma is that there is a well-marked pathological change in the parenchyma of the kidney, with its resulting functional disturbances.

First of all to be mentioned is pyelitis calculosa, which is due to an inflammatory process set up by the renal concretion, its intensity being in direct relation to the physical character of the latter. Pyelitis calculosa leads to a thickening and ulcerative process in the renal pelvis, with secondary inflammation of the parenchyma and the latter may almost entirely disappear in time from pressure atrophy. If at this stage the process should stop, a degenerative retraction and atrophy, in consequence of the pressure, will transform the kidney into a thin sac, tightly enclosing the calculus.

A most important complication of pyletis calculosa is an obstruction of the ureter from one or more calculi; either on account of their size, obstructing its pelvic orifice, or by direct entrance of the stone into the lumen of the duct. If obstruction is complete we then will have an accumulation of urine and retention of the catarrhal products, such as pus and blood in the renal pelvis, and the result of this retention is most always an ammoniacal decomposition of the urine with all its serious consequences.

A permanent obstruction of the ureter will result in a dilatation of the pelvis and calices, due to pressure atrophy of the tissues, while if the contents of the kidney are aseptic a hydronephrosis will finally develop, or if on the contrary they have become infected, a pyonephrosis occurs.

We now know, since the writings of Albarran, that hydronephrosis from renal calculi is not infrequent in very young children, and at the recent meeting of the French Association of Genito-Urinary Surgeons, Dr. L. Bernard reported several instances, the oldest subject being only eight months old. These hydronephroses are strictly latent, and in babies they have not time enough to give rise to tumor, and the condition is only found

at post-mortem, death being due to some other cause. Bernard remarks that these hydronephroses in babies may possibly continue their evolution and that when they arrive at the adult age they are met with by the surgeon either as a hydronephrosis, or, if secondary infection of the contents has taken place, as pyonephroses.

Another unfortunate complication is when a suppurating pyelitis calculosa breaks into the perirenal tissues, giving rise to perinephretic abscess.

Generally nephrolithiasis is present in only one kidney while the normal organ undergoes a compensating hypertrophy; occasionally, however, both kidneys are affected as in a case reported by English in 1890.

The symptoms of renal calculi are, with the exception of rare instances in which the stones produce no or only slight disturbances, very characteristic, and are not likely to be overlooked by the physician.

Firstly, we have periodical hematuria, usually accompanied by slight agitation, fever and a pain corresponding to the region of the diseased kidney, and descending along the course of the ureter and upper part of the thighs. But what is still more important as an objective sign, is the presence of gravel in freshly evicted urine. These important diagnostic signs are still more valuable in making a diagnosis, whether the initial subjective symptoms be observed or not, when hematuria is accompanied by pyelites, continued pain and renal colic.

The urine will give an acid reaction and microscopically will reveal a considerable amount of admixed pus. Severe hemorrhage, especially when due to the presence of a prickly oxalate stone, produce a well-marked change in the general nutrition of the patient.

When there is a permanent ureteral obstruction between the bladder and renal pelvis, the patient is threatened with a suppurative process and finally cystic kidney, the latter condition being made evident in the form of a palpable tumor in the lumbar region. The continued pains above alluded to probably accompany the destruction of renal tissue from the nephrolithiasis; they vary very much in intensity, but are to be characterized by a sensation of painful tension and pressure in the lumbar region. The pain is, according to Ebstein, most probably due to a direct irritation of the nerve filaments by the concretions.

Renal colic, which is due to the entrance of a calculus into the ureter may develop insidiously or may suddenly attack the patient while at work or asleep. Colic is certainly to be regarded as the consequence of a forcible and acute dilatation of the ureter above the seat of the calculus rather than to one direct irritation of the mucous membrane of the duct. Usually severe strangury occurs and the patient will void only small amounts of thick blood-mixed urine. When one ureter is completely obstructed and still a clear, light color is voided, we have a very important fact for the surgeon to bear in mind, namely that the other kidney is in a good condition.

If both ureters are obstructed, and this obstruction is not relieved

early, death will follow, the patient presenting all the symptoms of uremia.

The diagnosis of nephrolithiasis is based on what has just been said. The chemical nature of the calculus, as well as the presence of a pyelitis is to be sought by a microscopical and qualitative examination of the freshly voided urine. The presence of epithelium and epithelial casts would point to an inflammatory process within the kidney. The Röntgen rays may also be resorted to with success as has been done by Macintyre and H. Morris and others.

As to typical renal colics, supposed to be close to nephrolithiasis, it should always be remembered that they occur without a stone being present and Israel reports a number of cases in which colics, with their entire train of symptoms were due to intermittent hydronephrosis dependent on a movable kidney. It is also quite certain that nephrolithiasis may sometimes be mistaken for a simple pyelitis, tuberculosis or malignant neoplasm of the kidney, although the greatest attention may be given to the symptoms.

Blood contained in the urine is of diagnostic value, when its presence is not due to a catarrhal condition of the genito-urinary system, if it is constantly to be found, even if it be in microscopical amount. Bloody purulent urine, on the contrary, is not often seen in pyelonephrosis or pyonephrosis of a simple catarrhal or tuberculous nature.

Frequent and severe hæmaturia would lead us to believe that the case was one of renal neoplasm rather than nephrolithiasis. But although we have these most important and varied symptoms, there remain nevertheless a certain number of cases in which it is most difficult to the necessary symptoms which are so necessary for a correct diagnosis and indication for operative interference and it is in just such instances that an exploratory incision through the lumbar region should be resorted to. By an exploratory incision we reach the same end as in obscure cases of intraperitoneal affections; the kidney is freely exposed and can be palpated and in many cases the stone has been discovered, where it was not diagnosticated before operation. We should also remember that, besides digital exploration and acupuncture, if no stone be discovered, incision into the parenchyma down to the pelvis should be practiced, if we have serious reasons for believing that a stone is present, because the two former methods of examination have failed to reveal the presence of renal calculi which were discovered after the organ had been incised.

A case of nephrolithiasis should never be operated on especially if nephrectomy is proposed the proper operation, until both ureters have been catheterized, so as to ascertain if only one or both kidneys are diseased.

The prognosis of nephrolithiasis is always very serious not simply because of its incurability, but also because the patient's life is often in danger. The earlier the disease is recognized and a treatment instituted, the more favorable are the chances of cure. At the present time the prognosis may be considered considerably better than formerly on account of surgical interference and reliable diagnosis.

The treatment of nephrolithiasis lies in the indications deduced from what has been said regarding the pathology of the affection, and is consequently rather more surgical than medical; and as we have mentioned elsewhere, it is difficult to decide the point beyond which medical treatment may be considered as of no avail, but by studying the reported cases it may be reasonably assumed that surgical interference should be resorted to when medical treatment has proved itself useless or when any complications arise, such as pyelitis, anuria, etc.

The medical treatment should first of all be directed against the acidity of the urine, as well as to counteract and prevent a too excessive uric acid formation. A concentration of the urine must also be guarded against. These indications are to be sought for in a proper diet, restricting the amount of meat or a too great amount of food.

The recent experiments concerning the action of food with reference to the reaction of urine, show that vegetables and glucogenic substances give the slightest acid reaction, cereals and milk give the most pronounced, while meat, eggs and sugar are between the two. Therefore it would appear that a vegetable diet is to be strongly recommended and observed by the patient, while sugar, fatty substances, strong alcoholic drinks, spices are to be absolutely forbidden.

When we have a gouty or obese patient presenting a nephrolithiasis a more severe régime must be ordered. As complete as possible oxidation of uric acid derived from the albuminoids must be attained by exercise of every description. The frequent use of warm baths and a goodly amount of fluid ingested, greatly assists the change of material and diuresis. Saline and other purgatives are to be avoided as they decrease the quantity of urine.

Theoretically, the endeavor to dissolve the renal concretions by alkalines and alkaline mineral waters appears rational. Brücke, Pfeiffer and others have demonstrated by experimental work, that after the continued use of this class of water and drugs the urine has a greater dissolving action on uric acid. Of the numerous remedies that have been recommended, the phosphate of sodium in doses of 5 to 15 grams in twenty-four hours are particularly useful and I have frequently ordered the following combination with apparently happy results:

℞. Sodii phosphat.,
Sodii bicarb., āā 45.0.
Lithii carbonat., 10.0.
D. in scatul.
S. A dessertspoonful dissolved in a glass of water, thrice daily.

Danforth speaks most highly of the potassium citrate in doses of two grams every three or four hours and personally I have prescribed it with good results as follows:

℞. Potass. citrat., 1.00.
Sodii bicarb., 0.50.
Lithii carb. effervs., 0.25.
In chart. no. I. D. tal. dos. no., xx.
S. Take four or five powders daily in a glass of water.

Benzoic acid and the salicylic salts have also been employed with advantage. Piperazin, lysidin and urotropin also diminish the acidity of the urine, and when complicated by renal suppuration, urotropin is of much value, but a reduction in the acidity is just as well accomplished by the phosphate and carbonate of soda and are much the cheaper drugs.

When there is pyelitis the writer has given urotropin, fifty centigrams in water several times daily, on account of its real antiseptic properties in the genito-urinary tract, or the following formula.

℞. Acidi benzoic.,
Natrii salicylat., āā 3.0.
Aq. chloroform., 90.0. M.
D. S. To be taken in four doses during the day.

For severe hæmaturia we have employed ferripyrine in several cases with a satisfactory outcome, combined as follows:

℞. Ferripyrini, 1.0.
Tinct. gentian. comp., 10.0.
Syr. cort. aurant., 90.0. M.
D. S. Take a dessertspoonful every two hours.

or:

℞. Ferri albuminat., 0.25.
Acidi taninici, 0.05.
Sacchar. alb., 0.50.
In chart. no. I. D. tal. dos. no., xv.
D. S. Take three to four powders daily, according to indications.

A cure at some mineral water resort is really of some value and at these places the advantages of producing oxidation of uric acid by baths, strict attention to diet and a well-directed exercise, tend to have an excellent action.

The waters that the writer would particularly recommend are first of all Vichy and Contrexéville in France which are probably the best for this class of cases in the world, while in Germany we have Fachingen, Friedrichshall, Driburg, Neuenahr, Giesshübel, the much over-estimated Karlsbad and in Switzerland the excellent resort of Tarasp.

The much-advertised lithia waters contain this substance or its salts in such minute quantities, if even at all, that an artificial water is to be preferred, but it appears to the writer that the salts of lithium are far too insoluble to be of any marked therapeutic value in the disease under consideration.

Of great practical importance to the physician is the treatment of renal colic. Morphine combined with atropine, or some preparation of opium

must be freely given, or chloral or chloralose may be substituted. Chloralose is a most excellent narcotic, but its action is rather long in manifesting itself and the average dose should not exceed fifty centigrams.

Warm baths are both relaxing and sedative and are to be used with advantage in severe cases.

Olive oil in massive doses per os, as given in gall-stone colic, has been greatly lauded by some authorities. Hot rectal enemata probably relax the ureter.

Renal calculus becomes a surgical affection as soon as a rational medical treatment has failed or if anuria develops or hæmaturia of a severe type. In anuria, success depends on the promptness of interference and Israël advises operation within forty-eight hours from the onset, although cases are recorded in which urine was again voided after the lapse of six, eight or even twelve days, but these are exceptions upon which the surgeon should not count. The operation which gives the most satisfactory results and restores the affected kidney, is certainly nephrolithotomy. By this operation we understand a removal of the calculus from the kidney *before the organ has suffered irreparable lesions resulting from the presence of the foreign body.*

If the concretion has produced a pyonephrosis, with pressure atrophy and inflammatory changes in the renal parenchyma which have gone on to suppuration, *restitutio ad integrum* is impossible. Under these circumstances we should resort to nephrectomy, remove the stone and drain the kidney, for as long as there remains any parenchyma, an endeavor to preserve the organ should be made, as it can still aid in the excretion of a certain amount of urine. Occasionally, primary nephrectomy may be indicated when the renal parenchyma is entirely destroyed, while a secondary nephrectomy is at times rendered necessary on account of a fistula following nephrotomy which cannot be made to close, or when severe pain continues after a nephrolithotomy.

Nephrolithotomy and nephrotomy are often confounded, which is entirely wrong, because they differ both in their prognosis and diagnostic indication. The former acts directly at the root of the trouble, while nephrotomy is simply done to battle against the complications resulting from the progress of lesions due to calculi.

Technically we have two ways of incising the kidney to remove the stone. We can open the renal pelvis and explore the calices and pelvis with instruments or fingers for stone, but we most strongly condemn this method on account of hemorrhage, difficulty in getting union *per primam*, and Tuffier shows that the mortality by this method is 16.6% while the occurrence of post-operative fistula is 20%.

The other and proper route to follow is an incision carried along the convex border of the organ, directly through the parenchyma into the pelvis. Temporary hæmostasis can be secured by applying the writer's renal pedicle clamps, thus rendering the field of operation bloodless.

When the calculus is very large it must be crushed *in situ*, but this nephrolithotomy is to be avoided when possible, because the extraction of the fragments is difficult and greatly increases the duration of the operation.

When the stone has been removed, deep catgut sutures are placed in the renal parenchyma, the borders of the kidney incision are brought together and the sutures tied. This must not be done too tightly, because when the pedicle clamp is removed, the kidney fills with blood and consequently increases in bulk and the sutures if too tightly tied, would cut through the renal tissues. By suturing the kidney there is hardly any chance of a post-operative fistula occurring.

If, after incising the kidney, we find a large phosphatic calculus, sending out branches throughout the renal parenchyma, we believe that nephrectomy is indicated, because the entire removal of the calculus by nephrolithotomy becomes impossible on account of the extreme brittleness of this type of stone. Pieces are consequently left within the kidney which only continue the irritative and suppurative processes and, what is more important still, they act as foci for future calculus formations.

As to the incision which gives the best working space there are several, and the lumbar route is the proper one to select in our way of thinking for the following reasons: 1. *It is by all odds the most accessible route to the kidney.* The abdominal route exposes the surgeon to the danger of lacerating the renal vein or even the vena cava, and if the kidney be at all adherent the considerable depth in which the surgeon works renders the operation difficult to say the least. 2. *The lumbar incision offers far less danger of infection of the peritoneum* from the exposed end of the ureter, or if the kidney is septic the escaping pus does not contaminate the peritoneal cavity. 3. *Drainage of the kidney is easy through the lumbar incision.* 4. *The pedicle can be secured before detaching the kidney from its bed*, and there is less danger of injury to the vena cava.

Simon's vertical incision extends along the outer border of the sacro-lumbalis muscle, from the lower border of the eleventh rib perpendicularly, until midway between the twelfth rib and iliac crest. Bruns and Linser carry their incision more to the front, about eight or ten centimeters from the spinous process, down to the iliac crest.

Czerny and Küster employ a straight transversal or slanting incision, carried from the outer border of the sacro-lumbalis muscle, parallel with the twelfth rib and then carried slightly obliquely downwards and forwards.

König's retroperitoneal laparotomy, which may be recommended in cases of very large kidney, is as follows: The soft parts are incised perpendicularly downwards, along the border of the erector spinæ up to within a few centimeters above the ilium. From this point it is carried towards the umbilicus until the external border of the rectus muscle is reached and if necessary the incision may be extended directly to the umbilicus.

Bardenheuer's "trap-door" incision is also to be recommended in cases

where much space is required. Von Bergmann's incision is much used in Germany. It extends from a point on the eleventh rib corresponding to the border of the latissmus dorsi and then runs downwards and forwards to the inner third of Poupart's ligament. In all these incisions their direction is unimportant because they can, if necessary, be increased either upwards or downwards. The principal point lies in the fact that we avoid opening the peritoneum.

Tuffier's incision is, all things being equal, perhaps the best. It commences at the eleventh rib, about eight centimeters from the spinous apophysis and is carried down to the iliac crest.

No matter what incision be employed, the remainder of the operation is the same. The adipose capsule is slit through and the kidney brought up into the wound. If nephrectomy is to be performed on account of advanced and complete destruction of the renal parenchyma, the pedicle should be tied off in two ligatures en masse and the kidney removed quite a distance from the ligature, and it is well, we believe, to leave a small portion of the renal pelvis attached to the pedicle which will prevent the ligatures from slipping off.

For the sake of security, the pedicle may be included in a third ligature en masse or the vessels may be isolated and tied off separately. After this the incision may be closed with or without drainage according to the circumstances present. In some few cases in which the pedicle is so deeply situated as to be reached with difficulty, so that the ligatures cannot be placed and tied securely, two or more clamps may be placed on the pedicle and left *in situ* for forty-eight hours or more, just as we do in vaginal hysterectomy. This has been done by Fedoroff in three cases with success.

In closing, gentlemen, I would say that I am well aware that I have brought nothing novel before you, but it occurred to me that a résumé, although incomplete as this one is, of the vast subject of nephrolithiasis might result in a discussion from the members of this body, which, by bringing to light facts gleamed from their experience would be of considerable help in the advancement of our knowledge of this interesting pathological entity.

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THE MEDICINE OF SUPERSTITION.

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THE practice of medicine is as old as history itself, but the science of medicine is quite young. Perhaps the latter half of the present century will embrace the time since medicine has been studied in a true scientific spirit. God-given from Apollo to his son Æsculapius, according to the Greeks, the healing art was in its early days clothed in mystery; and to the ignorant it yet remains a semi-mysterious realm. Its history is wrapped in superstitious customs and associated with strange ceremonies, which have been handed down from generation to generation for many centuries. Medical therapy was often linked to witchcraft in the person of some old hag, toothless and wrinkled, who aped acquaintance with the supernatural and could dissipate disease with a charm. The busy practitioner finds yet almost daily examples of such "old granny" superstitions regarding disease existing in the gullible minds of the uncouth; and they will give up their doctor sometimes rather than weaken their faith in them. Indeed traces of these superstitions are often discovered among people who are quite intelligent in other respects. Very seriously did an old lady take me into her confidence one day by divulging a remedy for obstinate

nose bleeding. Three strands of silk thread tied around the neck, said she, would stop it after all else in the way of medicine and doctors had failed, for she had seen it tried. Who has not heard of the horse chestnut or the lump of sulphur carried in the pocket for rheumatism; the bag of asafœtida about the neck or a raw onion wrapped in silk to keep disease away; and the string of amber beads for croup?

Ancient writings tell of how the Persian Magi, or wise men, knew of herbs which, wrought into pills and swallowed in wine, would make the guilty confess their secrets. There was an herb for begetting good and handsome children and a wort to revive old love, when it had turned to hate.

The palpitating heart of a mole, when swallowed, gave one the art of divination, while the heart of a hen, they said, placed upon a woman's left breast while she slept would make her tell her secrets.[1]

Amulets played a prominent part in the remedies described by Pliny, many of which are curious. For malaria he prescribed the dust in which a hawk was rolled; the longest tooth of a black dog; a solitary wasp caught in the left hand; the head of a viper cut off, or its living heart cut out and wrapped in a piece of cloth; or the snout and tips of the ears of a mouse.[2]

The Chinese still retain much of the folly of their ancient materia medica. It is said that much of the feeling engendered against the foreign missionary physicians in China is due to the firm belief the natives have in the efficacy of the eyes and vitals of the human body in disease. They spread the rumor in more than one instance, that the foreign doctors, whose skill they were forced to admit, obtained their medicines by kidnapping and murdering Chinese children—a general massacre of the Christians following as a result of their jury.

Mitford describes seeing a Chinese doctor give a child with fever a decoction of three scorpions. The European leech of the last century held in high esteem the ashes of a burnt witch, for gout or fever. Ague in Ireland was to be cured by the sufferer swallowing a living spider. In Somerset, England, a large black spider was shut in a box and left to perish; and in Flanders, a spider is imprisoned in a walnut shell and worn around the neck. In Lincolnshire a girl suffering from ague cuts a lock of her hair and binds it around an aspen tree, praying it to shake in her stead. The first violets of the season may be chewed or a three-colored cat kept in the house.

Even in sturdy New England the superstition of the mother country leads to the manufacture of pills of spiders' web as a cure for ague, and Longfellow refers to the traditionary remedy for malaria,

> "By wearing a spider hung round one's neck
> In a nutshell."

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[1] William Murrell, A Manual of Pharmacology and Therapeutics.

[2] *Medical Record*, Nov. 21, 1896.

In Japan the ancient medicine man dealt largely in carbonized animals. The rarer the animal and the further it has travelled the more remarkable the cures accomplished by it. Tigers' claws, teeth and skin were valuable, and especially the center of the tiger's eyeball. The joyous lizards which dart about in the sunlight were popular as a vermifuge. Toads' paws, wolves' eyes, vultures' claws, human skin and fat were thought to possess remarkable virtues. Although China has advanced but little in medical science Japan has, and, having broken the shackles of superstition, at the present day occupies a place in the front ranks of the profession which is much to her credit.

The Japanese remedies mentioned are not worse than the mummy dust so highly prized in Europe and recommended in the standard medical works of Nuremburg two hundred years ago. So much in demand was it that only the wealthy could afford it; and it is a fact well known to history that this formed the principal ingredient of the well-stocked medicine chest Francis I. of France valued so highly and kept ever near him.

"The hare's gall mingled with honey brighteneth the eyes," says an old chronicle; and an ointment made from a wolf's eye was the best prescription of the ancient Saxon oculist. Far from alluring is the practice in Aberdeenshire. The cure for sore eyes is to lick the eyes of a live frog. The person thus healed has thenceforth the power of curing all sore eyes by merely licking them. So in Ireland to the tongue which has licked a lizard all over is ascribed the marvelous power forever of healing whatsoever sore or pain it touches. As a preventive of sore eyes we are told by Marcellus that when a shooting star is seen, as many numbers as possible should be counted, for as many years as you count numbers you will avoid inflamed eyes. The Saxons used the juice of an emmet's egg or the gall of a goat for deafness. Extreme cases were cured by a mixture of equal parts of boar's gall, buck's gall, bull's gall, and honey, with sometimes the addition of very nasty ingredients. One prescription directs that "the bowels of an earwig be powdered with the smede of whatever meal and the netherward part of marche and mingled with honey."

They also devoted much attention to their hair. Falling of the hair might be prevented by dead bees burnt to ashes and seethed in oil with willow leaves. If the hair were too thick "then must a swallow be burned to ashes under the tile and the ashes sprinkled on the head." For a depilatory emmet's eggs were rubbed on. Various forms of disease were combated by the heart of a fox mingled with frankincense, and the oil in which various portions of this animal's body had been seethed averted baldness, "then the hair holdeth on and the salve compels that it shall grow."

In a quaint volume printed in 1712 in Edinburgh, "A Collection of Useful Remedies for most Distempers," collected by John Moncrief, we find that the head washed with a lee of the ashes of cow's dung, then the burnt ashes of little frogs applied, cures the falling of the hair called alopecia. Other medicaments mentioned are: The burnt ashes of goats'

dung mixed with oil; the ashes of a goat's hoof mixed with pitch; the blood of a shell crab. However, the blood of a bat, or a little frog, the powder of swans' bones or the milk of a bitch hinder the growth of the hair.

For toothache our ancestors had also some remarkable remedies, such as spitting into the mouth of a frog and telling him to be off with it. Also for pain of jawl a swallow burnt to dust and mingled with field bees' honey should be given the patient to eat frequently. The gall of a he-goat mingled with oil, or the tusks of a hound burnt to ashes and sprinkled on wine may be given the man to drink. "Hideous," says Gordon Cummings, "is the remedy for toothache practiced at Tavistock in Devonshire. A tooth must be bitten from a skull in a church yard, and kept always in the pocket." We find also a preventive in trimming one's nails on Friday, and as a cure for toothache, the eating of bread a mouse has nibbled. Kiss a mule or rub the gums with the body of an ant, bettle or fly.[1]

For epileptic fits the cures were as numerous as they were horrid. The *Chinese Repository* published in 1832 relates that dragon's bones may be used. These may be found on banks of rivers and in caves of the earth, places where the dragon died. The best are known by slipping the tongue lightly over them, but if these are taken from damp places or by women they are worthless. Old English medical works of high authority recommend powdered elks' and deers' horns; and in Caithness only a few years ago the skull of a suicide was used as a drinking cup for the cure of fits. Dr. Arthur Mitchell recounts a case in which the body of a suicide was disinterred in order to obtain the skull for this purpose. To reduce such a skull to powder and swallow part of it was a surer specific. Even the moss which grew on such skulls was deemed highly efficacious for certain ills. This is mentioned in the official *Pharmacopœia*, London, 1678. This same work in 1724 refers to unicorn's horn, human fat, human skulls, dog's dung, toads, vipers and worms as possessing real value in disease.

Scotland likewise followed the skull treatment for epilepsy. Sir James Simpson knew of a case in Rosshire of a lad attacked with fits. Moles' blood was given but failed; and a messenger was sent nearly a hundred miles for a bit of the skull of a suicide, which was scraped to dust, mixed with water and administered to the boy. Sometimes the epileptic was made to drink blood drawn from his own arm. Here is another cure that reminds one of the old well-known remedy of rubbing a gold ring on a stye to abort it. It is to "draw the brain of a mountain goat through a golden ring, give it to the child to swallow before it tastes milk and it will be healed." As a sacrificial remedy living cocks were sometimes buried; while blood from a weasel, seven drops of blood from the tail of a cat, or blood from a recently executed criminal are all remedies for this strange malady—which we are still far from thoroughly understanding.

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[1] *Journal of Practical Medicine*, February, 1898.

Insomnia was baffled by placing a goat's horn or wolf's head under the pillow. The wolf's flesh was also a cure for "devil sickness," and Miss Bird has described how great faith the Chinese place in the dried blood of the tiger, which they so much admire, as a tonic, giving strength and courage to him who takes it.

During the sixteenth century the horn of the unicorn was deemed the best antidote to poisons; and in that treacherous age, says Cummings, drinking cups were carved from it as a safeguard on account of its neutralizing powers. At the close of that century on one occasion the learned doctors of Augsberg met in solemn conclave to examine a certain specimen of unicorn's horn and decide whether it was the true monocerus or not, which they determined by an experiment on a poisoned dog.

Spider's bite was antidoted by the sinews of a fox swallowed raw; and the rennet in wine was given for the bite of a serpent. In Devonshire, England, a person bitten by a viper is advised to kill the creature and rub the wound with its fat. This same treatment has survived in some of the northern states of America and reminds one of the traditionary "hair of the dog is good for the bite"—a true homeopathic *similia similibus curantur*.

The living fox seethed till the bones alone are left makes a foxy essence which was reputed a sure cure for disease of the joints if rubbed thereon. The medicine of the long ago known as *Pulvis æthiopicus*, which was deemed so valuable as both an external and internal remedy was neither more nor less than powdered toad. In Devonshire the "wise man" for the relief of rheumatism will burn a toad to ashes and tie the dust in a bit of silk which the sufferer must wear around the neck. To the sick poor who are rarely lacking in the primary necessity of faith in the means adopted, frogs are well nigh as valuable as toads. Thus frog's spawn placed in a stone jar and buried three months till it turns to water is regarded by the people of Donegal as a wonderful cure if rubbed into a rheumatic limb.

The snake also comes in for a share of consideration for palsy, leprosy and rheumatism, in the early medical lore of both Japan and Britain. Even in this country, according to Black's *Folk Medicine*, the New Englanders are accustomed to wear a snake skin around the neck for rheumatism. This is no doubt a direct heritage from the medical traditions of the mother country; but we are also told the Indians of America made use of rattlesnake oil for the same malady. Patients with rheumatic gout, however, found a potent remedy in the wearing of a copper ring made from a coffin nail. Also if the patient carry on his person the tooth of a mole or a dried toad.

The different things that have been and still are used by the ignorant as styptics would alone fill many pages. Here are a few of them. Hegoat's liver pounded with vinegar; the juice of swines' dung (perhaps for its aseptic (?) properties); snails; ashes of burnt frog or hens' feath-

ers; cobwebs; the herbs, shepherds' scrip and knot grass, "which have the property of stanching blood by merely looking on them." Drop vinegar water on the face of the patient who shall lie on his back all naked. Dry a toad well in the sun, put it in a linen cloth and hang with a string about the part that bleedeth, or let it touch the breast of the left side near the heart.

A strange custom prevails in Sunderland, where the inhabitants, for the relief of whooping cough, shave the head, and hang the hair upon a tree or a bush, believing that, as the birds carry away the hair, so will the cough vanish. While the people of Ireland, who have abundant faith in charms, keep headache off by thrice going around a certain tree at the holy well of Tubber Quan on their bare knees, then cutting a lock of hair which must be tied to a branch of the tree as a charm.

Almost as many cures for cancer obtained in former times as at present for the affliction, and were attended with about as much success in the end. Only two or three will be mentioned: the fresh warm flesh of a hen or a pigeon applied to the sore; the ashes of a mad dog burnt to dust, and especially human excrement.

For hard tumors and swellings goat's flesh should be burnt to ashes and smudged on with water. Again, shavings of the horn of a hart are useful to disperse ill humors and gatherings, as are also wood ashes seethed in resin; goat's horn burnt and mingled with water or its dung dried and grated and mingled with lard.

Is it much wonder that the human mind struggling in such a slough of discord and without perhaps a single idea of physiology or the science of medicine should ascribe to the kings of the last century, who were admittedly divine in everything else, the divine power of healing "King's Evil" or scrofula simply by a touch? Even to-day the approved treatment of this trouble in some parts of England is as senseless as in the days of Charles I., the "great healer."

The hind leg of a toad is to be dried and worn in a silken bag around the neck, or else that part of the living reptile answering to the part affected by scrofula is cut off, wrapped in parchment and hung around the neck of the sufferer. In Essex it is the vile snake again which must be drawn nine times across the neck, then killed and its skin worn, sewed in a piece of silk. Sometimes the snake is put in a bottle tightly corked and buried in the ground. It is expected that as the victim decays the swelling will subside.

Saint Anthony's fire or erysipelas was to be cured by the burnt hairs of a hare or the delectable medication of a plaster of earthworms or bullocks' dung still warm. Better still, and at least not quite so disgusting, burn a swallow's nest, dung and all, rub to dust, mingle with vinegar and smear therewith; and also a goat's horn roasted and pounded with acid reduces the inflammation of erysipelas.

The means employed for the relief of goitre are even more harrowing

than some that have been mentioned for other maladies. Oil from a lamp that has burned beside a death bed may be rubbed on the swelling; but in some parts of Britain the horrible charm of having the hand of a dead child rubbed nine times across the goitre must be undergone. It is even better if it is the hand of a suicide. Mr. Gordon Cummings [1] relates a case which occurred not so many years ago in which a poor woman living near Hartlepool, acting on the advice of a "wise woman" went alone by night to an outhouse where lay the corpse of a suicide awaiting the coroner's inquest. She lay all night long with the cold hand of the corpse resting on her even; but the mental shock of such a night of horror was so great that she shortly after died before it could be determined whether the treatment would have been successful or not!

SELECTED DIGEST.

BICYCLING AND GYNECOLOGY.[2]

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"WHAT was yesterday the fad of the few, is to-day the pastime of the many." "It has developed from a salutary athletic exercise into a great social obsession." "It has displaced the horse, and in woman has, in a measure, replaced the uterus." It need hardly be said in explanation that these aphoristic remarks refer to bicycling for women. They emphasize three of the ways in which cycling for women may be regarded: it may be looked upon as a form of sport, or as a duty impressed upon womankind by omnipotent Dame Fashion, or as a means of gynecological treatment. Doubtless there are some women to whom the bicycle is simply "a time-, labor- and money-saving machine of the rapid transit class;" but they are, I believe, in the minority.

It may, with truth, be said that bicycling by women, like the influenza, took the medical profession by surprise. Physicians, and more especially gynecologists, viewed with a certain amount of alarm the spectacle of numerous fair clients taking to the wheel, and were yet unable to do more than give general warnings and ill-defined counsel. Gradually, however, as it became evident that women were cycling and meant to cycle, a body of professional opinion grew up and it began to be possible to appreciate the benefits of the exercise, to recognize its dangers, and to formulate its

[1] *Nineteenth Century.*
[2] *Scottish Medical and Surgical Journal*, June, 1898.

contra-indications. During the past three years, and more particularly in 1896, many contributions to the medical aspects of cycling for women have appeared in the professional periodicals of America, France, Germany and Great Britain. Many of these were wildly laudatory of the new pastime; a few, including one at least by a female physician, were strongly antagonistic; and some attempted to form a fair, an unbiassed, and a moderate estimate of the hygienic worth of cycling for women. Further, the subject has been fully and seriously discussed in the French Academy of Medicine, in the *Société de médecine publique et d'hygiene professionnelle*, in the Washington Obstetrical and Gynecological Society, the Boston Obstetrical Society, the New York Obstetrical Society, and in the College of Physicians of Philadelphia. The result is that it is possible to give now in the form of a digest a consensus of medical opinion upon the advantages of bicycling for women, its dangers and disadvantages, its contra-indications and the precautions which must be taken in order to obtain in any given case a maximum of benefit with a minimum of risk.

Advantages of Bicycling for Women.

The many advantages of bicycling for women which have been claimed by writers on the subject, may roughly be classified as general, medical, and gynecological or obstetrical in their nature. Indirectly, of course, any general or medical benefit which is thus obtained is also of value from the gynecological standpoint.

1. *General advantages.*—One of the most evident of the general advantages that a woman derives from cycling is exercise in the open air; and inasmuch as the transit is rapid the open air that is enjoyed is not that of town but of country. Even in a large town a cyclist can soon reach the country districts. It is more, however, than a simple exercise; it is at least a recreation also, if it be not a very satisfactory form of sport. It is, to most women, an exhilarating pastime which walking for the sake of exercise cannot be said to be, save under exceptional circumstances. Further, bicycling has succeeded in doing what walking never accomplished: it has broken up the sedentary habit of the sex. Tennis and golf have also been successful in bringing about this consummation, but they both require special surroundings and equipment and are not so generally available. Horse-back riding, perhaps, is the most directly competitive form of exercise; but bicycling has two advantages over it in its more moderate cost and in the better posture assumed by the rider. Even if women were to ride on horseback astride and so get rid of the spinal rotation and unsymmetrical development which follow the use of the side-saddle, there would still remain the financial difficulty and conventionality would be needlessly shocked. The differences between the posture on horseback and on a properly constructed bicycle are well brought out photographically in Dickinson's monograph (15).

Another very important advantage which has directly proceeded from the use of the bicycle by women has been much needed alterations in dress. What dress-reformers have unsuccessfully striven for years to achieve, has been quickly brought about by bicycling, tennis and golf, but more especially by bicycling. We may not all agree with Baudouin (6) when he says a special dress is necessary for cycling, or homologate his order—"pas de corset et culotte bouffante, sans cela, pas de bicyclette;" but all will admit that it is a good thing for women that cycling has made the fashionable corset ("the child of the devil," Nash, 34) an impossibility, and has modified the dress even if it has not, in this country, brought into vogue the puged breeches ("culotte bouffante"). In place of the tight-fitting corset, the woman-cyclist wears with great advantage to herself, one with short pliable busks, and with the sides low and made with elastic, or adopts the "Ferris" or the "equipoise" waist. She has, perforce, to abandon high-heeled shoes, constricting garters and loose drapery; and she soon finds the benefits of a short, weighted skirt, lined with a glazed material in front, and of hygienic underwear. In some countries the skirt has been abandoned for "knickers" or "bloomers," but not always with marked advantage; and it seems to be of doubtful utility to push "reform" so far.

Advantages, less important perhaps than the two which have been referred to, have also been claimed for cycling for women. It has, for instance, been asserted that it gives more stable nerves and greater self-reliance, and the lady cyclist who successfully runs the gauntlet of the Strand or Fleet Street may with justice lay claim to clear-headedness, and to personal confidence and dexterity of no mean order; but the beginner will be well advised to postpone such feats, and ride near the kerb, slowly and in the less crowded thoroughfares. Enthusiasts tell us that cycling is better than anything else for "breaking up morbid trains of thought," and for "taking a woman away from herself;" and so long as it does not take her away too long from her household duties and other inevitable responsibilities, no great objection need be taken to the assumption. Again, it has been claimed that for the girl who has to go some distance every morning to her business, the bicycle is a better mode of transit than the bus, car or train, and under reasonable weather conditions this is perfectly true. Finally, Madame Gaches-Sarrante (24) extols bicycling for the moral rôle which it may play in society, it being an exercise which husband and wife can take together!

2. *Medical advantages.*—It has been claimed for cycling for men that it not only keeps a man healthy, but that it also makes an unhealthy man sound; and if we are to believe the medical practitioner, who is also an enthusiastic cyclist, the number of diseases which contra-indicate the exercise is very small. In fact, the contra-indications apparently vary inversely with the enthusiasm of the cycling doctor. The same purely medical advantages may be claimed for cycling for women. It is unnecessary here to enter into such questions as the advisability of cycling for women with

heart disease or pulmonary troubles; but there are certain morbid states that have an indirect bearing upon the special maladies of women, and whether patients suffering from such may, or ought to, cycle, is a matter of some moment. There seems to be no doubt whatever that chronic constipation, so common in women of all ages, is vastly benefited by cycling, it being always understood that the exercise is taken in moderation; and through improved regularity of the rectal evacuations, liver troubles disappear, and dyspepsias, even of long standing, show amelioration (41). In anæmia, also, and in chlorosis (39), the almost universal testimony is marked improvement from moderate cycling upon a suitable machine. With regard to hæmorrhoids, opinions differ; some (*e. g.*, Macnaughton-Jones, 27) regarding their existence as a contra-indication to cycling; others (*e. g.*, Theilhaber, 43) having found in some instances benefit (probably from diminution in constipation), and in others, increased discomfort. In functional nervous disorders, and especially in the protean and intractable neurasthenia, cycling for women has been found to be of benefit (*e. g.*, Azoulay, 13); but in all such cases the special requirements of the patient should be taken into consideration, it being conceivable that some neurotic women might be made not better but rather worse by the practice. It is scarcely safe to affirm, as some have done, that cycling is suitable in all the cases in which massage used to be recommended (27, 34); neither does it do good in all forms of insomnia. It is highly spoken of by Fauquez (21) in the treatment of obesity, especially when that occurs in plethoric, lithæmic women (19). J. Müller (32) has found that cycling in 72 per cent. of the cases observed caused temporary functional albuminuria, but he does not anticipate that the exercise will produce chronic nephritis; manifestly, however, it could not be recommended in patients already suffering from renal mischief.

3. *Gynecological advantages.*—The introduction of bicycling for women was soon followed by the discovery that there were several gynecological troubles which were greatly benefited by it, and the medical profession, instead of proscribing the exercise, began to prescribe it to patients suffering from minor pelvic ailments. The limits of indication have been quickly widened, till now it appears almost as if the gynecological panacea had been found. At any rate, the reading of the paper of Fauquez (21) suggests such a conclusion. He divides the indications for cycling into two groups—those in which it is recommended, and those in which it may be permitted. Here is his list:

It is to be recommended in:

1. Uterine congestion.

2. Amenorrhœa, in relation with arrested development of uterus or ovaries, with anæmia, chloro-anæmia, digestive troubles, neurasthenia, chronic diseases, physical or moral shocks, chills, falls, etc.

3. Dysmenorrhœa of the nervous type.

4. Dysmenorrhœa with congestion of the uterus and ovaries.

5. Vicarious menstruation.

6. Fibroid tumors, after the termination of the hemorrhagic period.

It is to be permitted in:

1. Mechanical dysmenorrhœa, congenital or acquired, and in membranous dysmenorrhœa.

2. Uterine displacements (prolapse, flexions and versions).

3. Chronic metritis with *post-partum* or *post-abortum* subinvolution, which is no longer painful and which is in process of cure, but with moderation.

4. Leucorrhœa in anæmic, chloro-anæmic, and delicate women.

Theilhaber (43), without enumerating so many indications, yet names not a few, including amenorrhœa from defective uterine development and nervous dysmenorrhœa in young girls and sterile women. Uterine displacements in the non-gravid do not form a contra-indication, and he has seen improvement follow its use in prolapsus uteri, probably from a better tone in the muscles. In cases of endometritis cycling seemed to do neither harm nor good, but theoretically it was contra-indicated in the hemorrhagic form. The same general testimony in favor of bicycling in cases of moderate uterine displacements and imperfect development was born by sixteen out of eighteen female physicians who were interrogated on the subject by C. W. Townsend (44). A remarkable case was that of a young married woman with retroflexion of the uterus and prolapsed ovary, with adhesions, dysmenorrhœa and pain on walking. She learned to ride a bicycle and used it all summer with the exception of the menstrual periods, riding thirty and forty miles a day at times. Examination then showed that the inflammation had entirely subsided, menstruation caused her very little pain, and the displacement, although still present, was not so sharply defined (44). W. S. Playfair (39) has reported the case of a lady with tender swollen ovaries who could not take carriage exercise and yet was able to cycle about without any bad results; and Norris (41) speaks of benefit in cases of lacerated perineum, relaxed pelvic floor, and uterine retrorsions even when a pessary was being worn. Prendergast (41) and Nash (34) anticipate that cycling by women will be followed by easier confinements and the birth of healthier children; but they think the risk of accidents is too great to make the exercise justifiable in pregnancy, although Nash notes three cases in which it was persisted in up to the sixth month of gestation with good results. Finally, Gaches-Sarrante (24) does not regard salpingitis or chronic salpingo-ovaritis as contra-indications to cycling, and considers it as better than Swedish massage in chronic perimetritis. Such are the gynecological troubles in which cycling has been found to be beneficial, and while in some instances (*e. g.*, amenorrhœa or chlorosis and menorrhagia of constipation) it is easy to account for good results, in others it is more difficult. It will, however, be easier to form a just opinion after a perusal of the alleged dangers of bicycling for women.

Dangers and Disadvantages of Bicycling for Women.

The dangers and disadvantages of bicycling for women may, like the advantages, be divided into general (including moral), medical or surgical, and gynecological. It has to be borne in mind that while a few writers see dangers in all cases, most recognize their presence only when the exercise is indulged in immoderately or upon a faulty machine.

1. *General disadvantages.*—E. D. Page (36), C. C. Mapes (30), Teresa Bannan (5a) and others, comment at some length upon the baneful effects which cycling by women has had upon the relations between the sexes. It is stated that the pastime has done much to break down the barrier of reserve between young girls and men, to lead to a free and easy *cameraderie*, to the rapid forming of undesirable acquaintanceships, and to consequent immorality, and even to seduction. Manifestly, however, these dangers are not peculiar to the use of the bicycle, and their existence has even been questioned. There can scarcely be many who regard cycling as "degrading women." Another disadvantage which has been dwelt upon is the risk of accident in crowded thoroughfares (4), and it is too true that many sad fatalities have occurred; but women ought not to ride in busy streets till they have obtained complete control of the machine, and they ought not to attempt the descent of hills till they can back-pedal. If ordinary precautions be taken, the risks of accident will not be great, and it may be left to the insurance companies to determine whether these risks of violent death are not more than counterbalanced by the prospects of healthful living which the exercise engenders.

It has been advanced as a disadvantage that cycling does not develop all the muscles, but only those of the thighs and legs, and that the other muscles waste, especially if excessive riding be indulged in (36). This is not quite true, for the body muscles and those of the arms do come into play to a certain degree, although, of course, the chief work is accomplished by those of the lower limbs. It has also been stated that bicycling was like using the sewing-machine, and would have like evil effects upon health and development. "As well compare mountain climbing with exercise in a tread-mill," writes Townsend (44), and Dickinson (15) has pictorially represented the differences between the two exercises. The essential differences may be arranged in parallel columns (44):

Bicycle.	*Sewing-machine.*
Out of doors.	Indoors.
Mental recreation.	Monotonous task.
Body erect (or should be).	Body bent over.
Increased circulation.	Stasis in lower limbs and pelvic organs.
Vision not concentrated.	Eyes fixed on fine points.
Exercise consisting of sweeping movements of legs and thighs, together with the use of all body muscles in swaying motion of balancing, together with more or less use of arms.	Exercise limited to restricted movements of legs.
Exercise demands deep inspirations.	Exercise so slight that deep inspirations not required.

The reform in dress, which some have regarded as an advantage of cycling, has been, curiously enough, cited as a disadvantage by others (36), and the reasons given are that the reform is not a real but only a temporary one, the corset, etc., being resumed in the evening, and that the garments worn when on the wheel are unsuitable.

As to moral dangers which have been ascribed to cycling from the production of perineal and vulvar pressure (27, 30, 31), and which have been specially emphasized by Dr. Teresa Bannan (5a), perhaps the best summary of the matter is contained in the following statement, made by Verchère (13) at a meeting of the *Société de médecine publique et d'hygiene professionnelle:* "Quant aux sensations voluptueuses qui peuvent se produire, elles n'apparaissent que lorsque la femme le veut bien." With a proper saddle, and with avoidance of the "scorching" posture, the risk of such dangerous developments is reduced to a minimum (14, 15).

2. *Medical and surgical dangers.*—It is unnecessary to do more than mention that there have been reports of the occurrence of sudden deaths from preëxisting heart lesions, and of the development of exophthalmic goitre, dilatation of the heart, dysentery, appendicitis, renal hemorrhage, dementia, hæmorrhoids, hysterical seizures, hernia, etc. Manifestly these are in most cases the results of overdoing it, of racing and of cycling upon very badly constructed machines, and all these practices ought to be left severely alone by women cyclists.

3. *Gynecological dangers.*—T. R. Evans (20) has dwelt upon the harmful effects of the bycycle upon the girl's pelvis. He deplores the fact that the girls of the present day walk too little and so do not mould the pelvis for the purposes of parturition, and he sees in cycling an exercise which will aggravate instead of ameliorating this wrong state of matters. The ischial tuberosities will be pressed upwards and inwards and the diameters of the pelvic outlet will thus be diminished, while the pressure upon the perineum will cause condensation and atrophy thereof, and so add "atrocious" pains to the second stage of labor and liability to rupture. There will arise increased need for instrumental deliveries, for symphysiotomy and cœliotomy, and placenta prævia will be predisposed to. Of course these dangers will not threaten the fully formed women, but only the young girl with the immature pelvis. The need for an age-limit in cycling is evident, and will be referred to immediately; but even in the case of girls riding at too early an age it does not necessarily follow that pressure on the ischial tuberosities will cause pelvic contraction, for direct pressure ought neither to approximate them nor to force them apart (17). Of course the use of a *badly constructed* saddle will easily result in such harmful effects. It is probably for the same reason (*i. e.*, badly constructed saddles) that the occurrence of minor vulvar traumatisms has been rendered possible. The cases of vulvitis (8), of erythema, abscess, and hæmatoma (1), of coccygodynia (27), and of ulceration and bruising of the vulva, frequency of micturition, and leucorrhœa (41) which have

been put on record will nearly all be found to be readily explained by too long rides upon saddles that are too narrow and are provided with a high pommel or peak in front.

Soon after the introduction of cycling for women several of the French gynecologists (13) spoke warningly of the pelvic congestion which might thus be produced. Damain especially referred to this, and Stapfer said, "Je crois que la bicyclette est un exercise congestionnant chez la femme;" but, as has already been shown, moderate cycling has rather tended to cure chronic pelvic congestion than to produce it. In seven cases of retroversion of the uterus, Pinard (13) discovered the exciting cause in bicycling and consequently forbade its use by women who had a tendency to uterine retrorsions. It has also been accused of reëxciting a cured inflammation of the uterus and appendages (37), of causing anteflexion of the uterus and inflammation of the ovaries (44), of setting up menorrhagia and metrorrhagia (3), and of leading to cystitis, uterine prolapse, and leucorrhœa (27, 41). In two cases of uterine myomata noted by Theilhaber (43), bicycling was followed by a large increase in the size of the fibroids, and an instance of rupture of the hymen from a fall on the pommel has also been recorded (3). Several miscarriages have been traced to cycling (37, 43, 44), and, as will be noted immediately, the exercise ought not to be indulged in during pregnancy, and ought to be quite forbidden where miscarriages have occurred in preceding gestations. One of the most curious ill results (of the *post hoc* order) for which cycling has been blamed, was the birth of a malformed infant by a woman who had cycled during her pregnancy (Leroy des Barre, 13).

The enumeration of the preceding dangers and disadvantages of cycling for women goes to prove the necessity for the recognition of the contra-indications which exist thereto, and for the adoption of the precautions which have now to be named.

Contra-indications.

Most medical men, whether cyclists or not, will agree with E. B. Turner (45) when he asserts that the following conditions form absolute contra-indications to cycling: (1) pregnancy, (2) menstruation, (3) the three months following parturition, and (4) before the age of seven years. Further, the morbid states of the heart, lungs, kidneys and brain, which contra-indicate other forms of muscular exercise, will also preclude cycling. Most writers are agreed that acute pelvic inflammation, recent displacements of the pelvic organs, fibromyomata, ovarian cysts and hæmatoceles form distinct contra-indications to cycling; but it may be well here to give the list of gynecological troubles which Fauquez (21) has drawn up, and in the presence of which the exercise must be abandoned. It is as follows: (1) amenorrhœa, in connection with pulmonary phthisis, cancerous affections, diabetes and organic diseases of the heart or kidneys; (2) metrorrhagia, or excessive menstruation; (3) inflammation of the uterus and its

appendages; acute metritis, painful chronic metritis, hemorrhagic or purulent endometritis, salpingitis, ovaritis, salpingo-ovaritis, perimetritis, pelvic cellulitis, and pelvic abscess; (4) pelvic hæmatocele, and uterine fibroids during the hemorrhagic period; and (5) in vulvitis and vaginitis before complete cure has been effected. With regard to certain other gynecological affections, such as minor degrees of prolapse, chronic pelvic inflammation, subinvolution, and uterine retroversions and anteversions, medical opinion is not yet fully formed; in instances such as these named, the gynecologist ought to make a complete survey of each individual case, and form his own opinion thereupon. This, however, seems to be certain: that women wearing a well-fitting pessary are not debarred from cycling. Women of advancing years, especially if near the menopause, should be extremely careful with regard to this form of exercise (27).

Precautions.

In order that cycling women may obtain a maximum of benefit from the exercise with a minimum of risk, it is not only necessary that the contra-indications be known and observed, but it is also essential that certain precautions be adopted. The family practitioner, as well as the gynecologist, must be prepared to give advice worth having on these matters. The doctor has to add to his already almost encyclopedian knowledge an acquaintance with the details of bicycles and bicycle seats, of gearings and the like, if he would keep abreast of the times and satisfy his fair clients. The precautions for ladies cycling may be summed up in one sentence—The exercise must only be indulged in upon a suitable machine, in a suitable dress, and in a rational manner. To begin with the last-mentioned precaution: No woman ought to overdo cycling—she ought not to ride to the point of exhaustion. Racing, record-breaking and scorching ought to be not even thought of; they are "physiological crimes" (22). A woman who has been in the habit of walking two or three miles daily over an easy road ought not suddenly to attempt to cover thirty or forty miles up hill and down dale daily on a bicycle. She may, to begin with, cycle about three times the distance she has been in the habit of walking; later, this may be increased as she finds she is able for it, always stopping short of exhaustion. Most of the evil results which have arisen from cycling have been due to the dangerous tendency to do too much riding, or to do it too quickly. With regard to the dress of the woman cyclist, enough has already been said (under the heading of the advantages of bicycling) to show that the shortened skirt and the modified corset constitute a costume at once hygienic and modest, and that it is not necessary to have recourse to "bloomers" or the divided skirt. The necessity of suitable woollen or flannel underclothing should be emphasized. Perhaps the most important precautions are those associated with the choice of the bicycle. The machine ought to be a good one, and ought to be fitted with pneumatic tires, the drop frame, satisfactory brake, and the other equip-

ments which go to make a "lady's safety" thoroughly deserving of the name. Whether or not a spring frame is necessary to prevent jolting (12) is not a question of very great importance; but it is essential that the seat be suitably placed and be adapted to the anatomy of the female pelvis. It should be brought well forward, and when the cyclist is erect in the saddle her heel should touch the pedal when lowest, her foot being in the horizontal position (34). The commonest faulty position is having the saddle too low and too far back; on the other hand, the saddle too high is also wrong, causing overstretching of the knee and ankle, which is very tiring. A perpendicular dropped from the hip socket should pass through the center of the pedal, and with the foot at the lowest point the knee should be slightly bent (15). Most saddles have been made too narrow, the cyclist being thus compelled to ride on the perineum instead of on the ischial tuberosities, and in many instances the pommel or peak has been too high (8, 41). The saddle should be broad enough to support the two ischial tuberosities, and it should have no central ridge, but rather a groove. In such saddles as the "Christy" and the "Pattisson" these essential characteristics are secured; in the former by placing two cushions for the ischia upon a flat metal plate, and in the latter by complete bifurcation of the seat, with an adjustable interval. Further, the gearing of the bicycle ought not to be too high; a wheel geared to fifty-three or fifty-six inches is high enough for most women, anything higher greatly increases the strain, both in going up and in riding down hill (41). Finally, the machine ought not to be too heavy. Nash (34) writes: "The first woman in Washington who publicly rode a wheel weighed eighty pounds, and her wheel sixty pounds; soon she weighed 120 pounds, and the wheel twenty-three pounds."

If the precautions which have been stated be taken, and, if the contra-indications be observed, there seems to be little doubt that cycling by women will be productive of much benefit, and that this method of making "unstable equilibrium stable by progressive motion" may yet turn out to be what it has already been stated by some enthusiasts to be, viz., one of the greatest and most health-giving inventions of the nineteenth century.

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REVIEW OF MEDICINE.

MEDICINE.

The Essential Role of the Pneumogastric Nerves in Yellow Fever as Shown by Experiments, with Remarks. (*New Orleans Medical and Surgical Journal*, April, 1898.) By Adrian Hava, M.D.

As a result of nineteen years of experimentation and observation, the author has concluded that the symptomatology and pathology of yellow fever depend upon some action of the specific poison upon the pneumogastric nerves in the cervical region. It is probably a progressive irritation of these nerves followed by a partial or complete paralysis. The degree of irritation determines the outcome of the case. He describes the difference between the disease as it occurs among the native Cubans and the unacclimated foreigner, and gives a description of the symptoms of the disease, endeavoring to show the association between them and the results of experimental irritation of the pneumogastric nerves. He gives a long series of experiments made upon the pneumogastric nerves in dogs, reporting the post-mortem lesions resulting therefrom. As the result of his experiments he concludes that it is not essential that the specific poison should reach the organs through the circulation in order, by its presence or chemical activity, to produce the symptomatology and pathological changes. In a susceptible person all that is necessary is the introduction into the system of the specific poison which stimulates progressively the pneumogastric nerves in the cervical region, partially or totally paralyzing them. In the fatal cases the paralysis is total. Difference in degrees of intensity of the disease correspond to the degree of involvement of the pneumogastric.

S. McC. Hamill.

Recent Views on the Influence of Diet on Gout. (Editorial in *Medical Press and Circular*, June 22, 1898.)

Without entering upon the vexed question whether uric acid is formed

within the organism or is introduced ready-made from without, the influence of certain kinds of diet, especially one which is unduly rich in nitrogenous constituents, has long been recognized as determining attacks of gout, this popular but still somewhat obscure affection. Moreover, it is now generally conceded that uric acid, as such, is not directly responsible for the production of the characteristic articular manifestations, its presence in the blood taking the form of an excess of the quadriurate salt. This, being an unstable body, gradually enters into combination with the soda of that fluid forming sodium biurate, a comparatively insoluble body, which is apt to be deposited in particular tissues with corresponding clinical results. In the Goulstonian lectures of last year, Dr. Luff took occasion to point out that proteid matter, in regard to the production of uric acid, was equally harmful whether derived from animal tissues or of vegetable origin. In the paper which he brought before the meeting of the Royal Medical and Chirurgical Society last week he gives us the results, and very interesting they are, of a further long series of investigations on the mineral constituents of all the vegetables in general use, in respect of their influence on the solubility of sodium biurate and on uratic deposits. He also ascertained the influence exerted by these constituents in retarding the conversion of the sodium quadriurate contained in the fluids of the body in gouty persons into the insoluble biurate. Speaking generally, he found that even in very small proportions the mineral constituents of the ash of nearly all the vegetables appreciably increase the solubility of the biurate. The most obvious explanation of this action would, of course, be sought in the alkalinity of the vegetable ashes, and it devolved on the author to ascertain *en passant* whether this action could be referred to any one saline constituent. One of the most curious of the facts revealed by these painstaking investigations is, perhaps, that the solvent effect of vegetable ash on sodium biurate bears no relationship, either direct or indirect, to its alkalinity or to the proportions of potassium, sodium, calcium, magnesium, and iron salts present. Instances are given of particular vegetables, the ash whereof exerts a powerful solvent effect on the biurate, the alkalinity whereof is low, while others with a high degree of alkalinity have little or no effect in that direction. He succeeded, moreover, in showing that the solvent effects on the biurate are not due to any one constituent of the ash. As in a vegetable ash one has presumably to do with definite and comparatively simple chemical compounds, nothing is more natural to assume than that the effects are chemical and are to be obtained by strictly analogous compounds prepared in the laboratory. The results of experiments carried out on this basis were, to say the least, surprising, for an artificial ash containing exactly the same proportion of the various constituents was found, on the contrary, to exert a deterrent influence on the solubility of the biurate, in all proportions, whereas the natural ash exerted a marked solvent action. The only explanation vouchsafed of this curious contradiction is the assumption of a hypothetical combination or combinations in

the natural ash which cannot be artificially imitated. A somewhat similar state of things, we may remark, exists in respect of certain natural purgative mineral waters. Not only do solutions of corresponding artifical laxative salts fail to produce analogous physiological effects, but even the salts obtained by evaporation, when redissolved, proved equally deficient in therapeutical effects. The practice of our ancestors, who were largely addicted to the administration of vegetable ashes in the treatment of gout and allied affections, thus receives posthumous scientific sanction. The next series of experiments bore on the effect of the ashes in delaying the conversion of the quadriurate into the biurate, and the author found that the mineral constituents of some of the vegetables retarded in a notable degree the conversion of the quadriurate into the biurate. It is inferred from these data that if such mineral constituents were present in suitable proportions in the blood of gouty subjects and if, at the same time, proper measures were adopted for promoting the excretion of the quadriurate by the kidneys, the elimination of that body might be secured without the occurrence of any precipitation of the biurate into the tissues. The vegetables whereof the ash proved specially active in retarding the conversion of the quadriurate into the biurate and in increasing the solubility of the latter, were spinach, Brussel sprouts, French beans, Savoy cabbage, turnip-tops, turnips and celery. The quantity of the mineral vegetable constituents required in order to secure a therapeutical effect is very small and well within the possibility of a suitably arranged dietary. Moreover, the effects of a therapeutically devised dietary might be reinforced by the administration of the ashes as such so that really a very hopeful prospect is opened up for the future of the gouty who will only have themselves to thank if they remain exposed to recurrences of their malady. The paper provides a long series of valuable data, the import whereof can only be appreciated after mature reflection and discussion. Their significance may not be quite that foreshadowed by the author because many of the facts are susceptible of other, and possibly conflicting, interpretations, but we are none the less indebted to him for an investigation which must have entailed an immense amount of highly-skilled and persevering labor.

THERAPEUTICS.

Guacacetine in Combination with Eucasine. (*Klinisch-therapeutische Wochenschrift*, No. 13, 1898.) Dr. Nied.

The author has been using the following combination for some time with apparently good results: Guacacetine is a derivative from the same group as creasote and guacacol and guacacol carbonate, resembling them in therapeutic action. It is a white powder, odorless, tasteless and non-poisonous; the daily dose being about ten grams. It does not nauseate nor cause loss of appetite by disturbing the digestion as most drugs of this

class do. B. von Strauss has reported improvement in cases of pulmonary tuberculosis in which the previous use of guacacol was unsatisfactory (*Centralbl. f. inn. Med.*, Nr. 25, 1896). Buchner in his monograph highly praises it. Köllner and Dakura have also observed good results from its use. The author mentions six cases; the first in a female, 36 years of age and subject to lung trouble for the past twenty years, weak and bed-ridden when brought under treatment. She improved perceptibly in fourteen days and was able to be about in three weeks. The second, a female, twenty years of age, suffering from chronic catarrhal pneumonia four years, was benefited in about four weeks. The third, a female seventeen years old, also afflicted with chronic catarrhal pneumonia was cured in about six weeks. The fourth, a male twenty-seven years of age, with tuberculosis of five years' standing was much benefited in four weeks. The fifth, a male, with chronic catarrhal pneumonia was greatly benefited in four weeks. The sixth, a female, seventeen years of age, was also benefited in four weeks. All of these cases, at the time treatment was begun, were very weak, with delicate stomachs and the majority suffered also from high fevers. The author has noticed uniformly good results in all cases of phthisis where guacacetine has been administered, but does not state clearly just why he combines it with eucasine or in what proportion.

NEWCOMET.

SURGERY.

Experience of Two Hundred and Forty-eight Cases of Abdominal Surgery. (*Canada Medical Record*, December, 1897.) By A. Lapthorn Smith, B.A., M.D., M.R.C.S., Eng.

From January, 1890, to November, 1897, he had opened the abdomen 248 times with seventeen deaths, or a mortality of $6\frac{3}{4}$ per cent. for the whole eight years. In 1892 he had lost two out of twelve operations, or nearly 17 per cent., but in 1895 he had lost two out of fifty-seven, or a mortality of only $3\frac{1}{2}$ per cent. In 1896 his death rate had been low, losing only two out of sixty, or a little over 3 per cent. Many of the operations were of the most serious nature, such as two of removal of large tumors of the kidney without a death; eleven large ovarian tumors with two deaths; fourteen abdominal hysterectomies with four deaths; nine ventral and umbilical hernias without a death; sixty-two for double pus tubes with five deaths; and ninety-nine ventrofixations with one death, which, however, had nothing to do with the ventrofixation as it occurred in a bad pus-tube case. He referred to the charge sometimes brought against gynecologists that they often operated unnecessarily. This certainly could not be said in his case, as he had complete notes of 4,300 cases besides many others which he had seen in consultation with other doctors, and out of these he had only opened the abdomen 248 times. He felt sure that there were at

least as many more who would have been greatly benefited by such an operation, and who were, on the contrary, dragging out a miserable existence while under palliative treatment. He had at least a hundred women under local treatment for diseased tubes who were having recurring attacks of pelvic peritonitis at intervals of from three months to two years, and most of these women would, he believed, eventually decide to have the cause of their sufferings removed. He found that this delay greatly increased the difficulties of the operation. If these tubo-ovarian abscesses were allowed to break into the rectum, bladder or vagina they became very dangerous to life. He had a great many cases of cirrhotic ovaries under his care, and these women, he believed, suffered much more than was generally supposed. Many of them had begged him to remove their ovaries, but it was his custom to decline to do so until they had first been treated for one year by other means. He thought that he had been too conservative, as many of these sufferers had reproached him for keeping them in misery so long when the operation was followed by immediate relief. In some of the greatest sufferers from chronic ovaritis, the ovaries were so small that they could hardly be felt, and yet the day after their removal the patients claimed that they were entirely free from the pain from which they had suffered for years. In eight years he had only opened the abdomen thirty-six times for diseased ovaries and had lost only one of them. In about a dozen cases he had left the ovaries in after cutting out cysts and removing tubes. His experience, however, of conservative surgery of diseased ovaries was on the whole unsatisfactory. All the women with two or three exceptions reproached him for not having removed both ovaries completely. He thought that he would be more radical in future for the patient's sake as well as for his own reputation. It was a mistake to believe that women were never really well after ovaries had been removed; in the majority of cases the operation has completely restored them to health. Among the most interesting cases was one of obstruction of the bowels ten days after removal of very adherent tubes and ovaries. The abdomen was reopened nine hours after fecal vomiting had begun, and the intestine was found kinked and adherent; it was detached and straightened out, and the patient recovered. He considered the management of tubal pregnancy as one of the most brilliant advances in abdominal surgery. He reported a group of seven cases, all of whom recovered. They had all been sufferers for years from tubal disease, and two of them had been urged to have their tubes removed several years previously. In four of the cases the diagnosis had been correctly made and the other three were mistaken for pus tubes. In two of the cases a live child was floating about in the intestines and in the third it was lying in the ruptured tube. In these three cases there were from one to three quarts of blood in the abdomen. The symptoms in these seven cases were not exactly the same as those described in the text-books. Most of these women had had their periods regularly, but in all the breasts were enlarged. He thought that when we had these three

symptoms: enlarged breasts, irregular flow and a painful rapidly enlarging mass in one side of the pelvis, we might suspect tubal pregnancy. If this is followed by an attack of syncope we might almost be sure of it, and should lose no time in operation, thereby saving every case. He thought that it was a disastrous policy to let them alone. Some of the nine cases of ventral and umbilical hernia were exceedingly difficult, it being necessary in some cases to leave at least one layer of the abdominal wall on the bowels which were adherent to the sac. They were nearly all closed with buried silk- or worm-gut sutures, which were left in. Although he had had a few cases of hernia following his early operations, during the last three or four years he had not had a case. This was owing, he thought, to leaving in the sutures for one month, a plan which he was the first to advocate. Since he had the Trendelenburg posture he did not use drainage, either glass, rubber or gauze, because it was unnecessary. He took great care to have the bowels well prepared so that they were rarely seen during the operation, and never handled. He was a firm believer in the value of flushing or washing every coil of intestines with salt solution; and he usually left from one quart to two gallons of it in the abdominal cavity to prevent adhesions and to satisfy thirst, as well as to wash out the kidneys, as it was rapidly absorbed, strengthening the pulse and preventing the distressing aching all over the body. In emptying very large tumors he always left about two gallons of salt solution to support the abdominal veins. He never used iodoform because of its smell, its cost and danger of poisoning, several cases of fatal poisoning having been reported here and elsewhere. He used nothing for disinfecting except permanganate, oxalic and bichloride, consequently there was no hospital odor. In eight cases the vermiform appendix was firmly adherent to the right tube. He laid great stress on the method of removing the appendix even with the cecum, and then closing the hole in the bowel as you would a bullet hole, with two rows of Lembert sutures, instead of leaving a stump. He knew of several cases in the practice of other surgeons in which the leaving of a stump had caused a troublesome fistula. He hoped that this suggestion would be generally adopted by those who were doing this life-saving operation more often than he, and he offered it as a small contribution towards the improvement of the technique of the operation.

OBSTETRICS AND GYNECOLOGY.

The Occurrence of Menstrual Secretion in the Fallopian Tubes of the Human Subject and its Significance. (*The British Medical Journal*, June 4, 1898.) By C. J. Bond, F.R.C.S.

Examination of normal Fallopian tubes removed during the menstrual period showed "a quantity of blood-stained mucus much resembling menstrual fluid," while in those tubes removed during the inter-menstrual

period "the contents were either clear or slightly opaque mucus from the adrupture of epithelial cells." This tubal menstrual secretion is a viscid, purple colored fluid, like a mixture of mucus and venous blood, and showing, under the microscope, red blood corpuscles and a variable quantity of leucocytes with some epithelial cells in various stages of mucoid degeneration. The tubal mucosa itself is altered, "the fringe-like processes of membrane which cover the rugæ or villi are swollen and thickened in transverse diameter and are infiltrated with leucocytes which can be traced passing in from the muscular and submucous coats, up the villi, and between and among the ciliated epithelial cells." The epithelium itself is not shed or absent to any extent, but many cells show signs of mucoid degeneration. This is not so in the inter-menstrual period. This secretion seems to begin in the tubes before it does in the uterus and also to cease earlier. It is not a fluid regurgitated from the uterus because it appears earlier or as early as in the uterus; there are definite changes in the Fallopian mucous membrane; post-mortem examination shows the fluid in both uterus and tubes; experiments on lower animals show no regurgitation, and regurgitation does not occur in women even in uterine distention from imperforate hymen. This blood may not be found in hydrosalpinx because of the sodium chloride in solution which breaks up the corpuscles and liberates the hæmoglobin or possibly because the early pressure stops the secretion in diseased tubes. The occurrence of tubal menstruation may account for some tubal pregnancies or much dysmenorrhœa or tubal colic or for some cases of recurring local pelvic peritonitis and some cases of hæmato-salpinx where no tubal pregnancy can be found.

GIRVIN.

Abdominal Enucleation of Myomata of the Uterus. A. Martin's Myomotomy. (*Monatschrift für Geburtshülfe und Gynäkologie*, April, 1897.) By Otto Engström.

Engström reports a series of one hundred cases in which he enucleated one or more fibro-myomatous nodules from the uterus with a mortality of only five per cent. None of his deaths were due to sepsis. The situation, number and size of the nodules varied greatly in size from a hazel nut to an adult's head, and in number from one to twenty-two. The uterus was, in some cases, symmetrically enlarged, but usually it was greatly distorted by the presence of the nodules. The ages of the patients ranged from twenty-eight to sixty-four, and their physical condition varied greatly. This "shelling out" of the nodules rendered unnecessary otherwise unavoidable hysterectomies. The argument against the operation—or that other nodules may develop and make a second operation necessary—has been substantiated in only a few cases and this disadvantage is more than offset by the physiologic benefit the women receive from the possession of the uterus and ovaries. As a result of the myomotomies the uterus is at first misshapen and useless, but it may soon regain its normal shape,

position and mobility. Even if it should not, "a misshapen uterus without its function restored completely is better than none." In four of his cases pregnancy has occurred, a very good percentage considering the ages, social conditions, etc., of his patients.

L. S. Smith.

Origin of Extra-Uterine Pregnancy. (*Berliner Klinische Wochenschrift*, Sept. 6, 1897.) By Strassman.

Strassman of the Berlin Obstetrical Polyclinic (University) contributes a most excellent study of this subject. The following is a résumé of its principal facts. This condition was first recognized about 200 years ago, and while until recent years it was thought to be very rare, it is now known to occur very frequently. Cases formerly designated as hæmatocele and hæmato-salpinx are now recognized as early extra-uterine pregnancies. Extra-uterine pregnancy means the attachment and development of the fructified ovum in the tube or at the tubo-uterine junction. Abdominal pregnancy is secondary to rupture of the tube and secondary extensions of placentæ formation. Ovarian pregnancy is very doubtful. Where does impregnation occur? The older view that it occurred in the uterus arose from the idea that the ciliated epithelia promoted the passage of the spermatozoa into the uterus and the same epithelia of the tube by their motion promoted the passage of the ovum but hindered that of the spermatozoa from entering the tube. From freshly excised organs it is now known that the motion of the uterine cilia is outwards and therefore if the spermatozoa can pass this tract they can as well penetrate the tube to the ovary without supposing a destruction of the epithelia of this tract. In the labyrinths of the tubal mucous membrane designated by Henle as receptaculi seminis the spermatozoa may remain a long time as verified by experiments on animals. We are indebted to Hensen for the conclusion that man in no wise differs from animals in conception and ovum and spermatozoid meet at the extremity of the tube (fimbriated) and that every pregnancy begins as extra-uterine. *The question no longer is how does conception occur in the tube but why does the impregnated ovum not reach the uterus and how can it attach itself to the tube and develop there?* We do not know how long it requires the ovum to reach the uterus, probably some days. In dogs, guinea pigs and rabbits Hensen and Bischoff have shown that the ovum passes several days in the tubes and Grusdew has confirmed this. Certain it is that at the end of the second week the human ovum is not yet free but remains nested in the uterine endometrium. The primitive furrows and blastodermic layers probably develop during the passage through the tube. Passage through the canal is prevented when the propulsive force is wanting or too feeble; when the canal is too narrow from external or internal causes; when the ovum is too large or of unusual form. The ovum is propelled by the cilia and possibly by peristalsis of which little is known; naturally, catarrhs and inflammations affect-

ing the cilia and tubal function hinder the passage of ova. Inflammations and adhesions from without produce stricture and obstruction. In this connection parametritis is the most important predisposing factor by causing distortions and stricture of the tube. Comparatively few nullipara develop extra-uterine pregnancy since this chief cause is found usually after delivery or abortion. Excessive development of the ovum occurs when the tube has been lengthened by tumors of the ovary or parovarium. Primary abnormality in the ovum has been often observed in extra-uterine pregnancy, as for example, hydramnios, encephalocele, twins and thoracopagus. As to the consistency of the ovum which is most difficult to analyze, it is supposed that disease of the Graafian follicles so alters the membrana granulosa that the ovum is rendered more adhesive to the tubal wall. Grusdew noticed that ova richly enclosed by cells passed more slowly through the tube. Hemorrhage from a ruptured follicle is more readily understood as a source of obstruction by clotting. How does the ovum attach and nourish itself? By the proliferation and metamorphosis of the tubal mucous membrane, from which chorionic villi are elaborated. *A priori* it is to be inferred that the ovum does not find its natural culture soil outside the uterus and probably most impregnated ova to which uterine access is difficult perish before or soon after attachment in the tube without causing any symptoms. Such cases are frequent. The theory that tubal pregnancy is an atavistic phenomenon is suggested by the larger functions of these organs in animals; but the decidual cells which are derived from the uterine connective tissue are also found in accumulated masses during pregnancy in the ovary and beneath the serosa of the peritoneum in Douglas's pouch whence the conclusion that the decidua is a reaction due to pregnancy and may occur in the tube as in the uterus. How these ciliated mucous epithelia contribute to building up the chorionic villi is not clear, but probably some influence exercised by the blastodermic layer of the ovum causes the proliferation, metamorphosis and change of function. The same process occurs in the tube in the uterus. That every impregnated ovum does not attach itself to the uterus is due to its envelope of cells, the membrana granulosa and the zona pellucida and that only after entering the uterus the chorion develops. Ovarian and abdominal pregnancy is doubtful because the blastodermic epithelia of the ovary and the flat epithelia of the peritoneum are so far removed in type from tubal and uterine epithelia that the attachment of the ovum by proliferation and metamorphosis is scarcely possible. Extra-uterine pregnancy, therefore, occurs when the impregnated ovum is unable to pass the tube; it attaches itself to the tubal wall and develops by proliferation and metamorphosis of the mucous cells from which the chorionic villi are elaborated.

MINOR MORRIS.

Gynecological Examination of Women Recently Confined. (*British Medical Journal*, May 28, 1898.) By Doléris.

Doléris dwells on the importance of a careful vaginal examination during the puerperium before patients are discharged from the medical attendant's care. He believes that a large proportion of such patients carry away from their confinement the seeds of most of the pelvic troubles to which they are subject later on. Examination is especially necessary when the puerperium has been attended by any signs of infection, and should embrace: (1) bimanual examination; (2) inspection of the vulva, vagina and cervix; (3) investigation of traumatic lesions of the cervical mucosa; (4) culture examinations of the cervical secretions; (5) catheterization of the uterine canal, with dilatation if necessary. This will often show the presence in the uterine canal of an abundant brownish or creamy liquid, in which, in infectious cases, pathogenic micro-organisms are constantly found. The infective condition which is often complicated by displacements and subinvolution should be vigorously treated. For displacement he employs the Hodge pessary in the case of retroversion, and the use of tampons for several weeks in cases of prolapse and colpocele. Treatment for these conditions at this time will avert many subsequent troubles and more serious complications.

La B. J. Leamy.

PEDIATRICS.

The Treatment of Asphyxia Neonatorum by the Hypodermatic Injection of Strychnia. (*American Journal of Obstetrics and Diseases of Women and Children*, April, 1898.) By Henry D. Fry, M.D.

The author, after classifying the various forms of asphyxia and relating a number of remarkable cases of resuscitation, takes up the subject of the treatment of this condition. In applying a treatment it is extremely essential to recognize the livid and pallid forms, which, though practically different degrees of the same form, require entirely different treatment. For the mild type, if the respiratory center fails to respond, the cord should be cut and a little blood permitted to escape. The infant should be suspended for a moment by the heels in order to remove any mucus which may be in the throat or trachea. A finger passed into the pharynx aids in this, and has the effect of stimulating the respiration. The surface of the body should be slapped with the palm of the hand, or a wet towel sprinkled with cold water or ether in order to excite the cutaneous reflexes. Immersion alternately into hot and cold water is effective. Schultz's method of artificial respiration should be resorted to if there is no response to the above treatment. Fifteen minims of whiskey hypodermically has been given by the author with good results. If the mild type does not soon yield, the more serious or pallid form comes on. The treatment should now change entirely. The more vigorous method should be dropped. If the child is born pallid, the placental detachment should not

occur. The child should be suspended by the heels for the same purpose as above, and to overcome cerebral anemia. External heat should be applied by immersion in water at 100° F. hypodermic injections of strychnia of 1/200 grain stimulates the respiratory center, the circulation, the paralyzed muscles, and abolished reflexes. This latter measure has been used with excellent results by the author for a period of eighteen months.

S. McC. Hamill.

Acute Leukemia in Childhood. (*Archives of Pediatrics*, May, 1898.) By John Lovett Morse, A.M., M.D.

In a review of the literature the author finds that seven cases of this condition are reported in childhood. To these he adds the following case: M. K., aged three years. The family history was entirely negative. The child was nursed for a year, then fed from the table. She was always subject to diarrhœa, but otherwise well. Six weeks prior to the time she was observed she had been put out to board. At this time she was well. No history could be obtained except that six days previously red spots appeared on the skin of the mouth. She had vomited blood and passed some blood from the bowel. Physical examination. Fairly developed and well nourished; very anemic. The gums were swollen, spongy and bleeding. The tonsils were large. There was a systolic murmur over the pericardia. The abdomen was lax. The edge of the liver was palpable an inch below the costal margin. The spleen extended some distance below the border of the ribs. The glands were generally slightly enlarged. There were numerous petechiæ over the legs and abdomen. There was no evidence of rickets, no tenderness about the joints nor swelling over the long bones. Her temperature was normal. The blood examination showed hemoglobin 25 %, red corpuscles 2,024,000, white corpuscles 87,400. The differential count showed lymphocytes 83 %, large mononuclear cells 11 %, polynuclear neutrophiles 5 %, eosinophiles 1 %. There was a slight variation in the size of the red cells, almost none in their shape. There were no nucleated forms and no myelocytes. A fresh liquid diet, lemon juice, and stimulation were ordered. The child died a week later. There was no autopsy. He considers the case from the blood examination as a mixture of the lymphatic and lienal varieties, but mainly of the former type. He gives in addition to his own case an abstract of all the cases heretofore reported. From these he concludes that there is no evident general etiology for these cases. The onset may be abrupt, or attended with general indefinite constitutional symptoms which develop gradually into the characteristic condition. The course of the disease in children is the same as in adults. It is usually of the lymphatic type. The blood conditions are the same as in adults, and the disease is always fatal.

S. McC. Hamill.

PATHOLOGY.

The Etiology of Syphilis. (*Centralblatt f. Bakteriologie, Parasitenkunde u. Infektionskrankheiten*, Vol. XXIII., Nos. 2 to 7 inclusive. 1898.)

Van Niessen, of Wiesbaden, in an exhaustive article embodying the result of much original work states that: (1) Syphilis is a chronic infectious disease of the blood, the contagium reaching the blood from without by means of the lymphatic vessels, and in turn is brought to the other tissues of the body from the blood by means of the lymphatics. (2) The contagium of syphilis in every case and in every stage of the disease from the moment of its entrance into the blood is capable of microscopical demonstration by staining and by cultivation. In many cases it can be found in the urine and milk; the semen, the sputum, the sweat, and the excrement may also contain the germs of the disease. (3) The contagium is not found in cases other than syphilis, or in disease complicated with it. (4) The virus of syphilis is a pleomorphous form of bacillus which stands in close relation to the higher organized fungi such as the actinomycetes of the class *Dematium* and *Cladosporium*. (5) The detection of the etiological factor of syphilis in the blood is an absolutely sure criterion for the diagnosis of syphilis and is therefore of the highest diagnostic importance in disputed cases requiring differentiation. (6) In all its stages syphilis is inheritable and communicable. This applies also to rabbits which are capable of being infected experimentally with syphilis. (7) With the therapeutic means known up to this time syphilis is absolutely incurable. Relative healing merely denotes a latency of the disease. It is therefore of the greatest importance to mankind that a really curative agent be discovered.

CATTELL.

OPHTHALMOLOGY.

Periodical Paralysis of the Superior Oblique Muscle. (Abstracted in *Lancet*, May 21, 1898.) By Aug. di Luzenberger.

The patient was a man, aged twenty-nine years, whose mother had suffered from migraine. At the age of twelve years, after a long walk in the sun with his head uncovered, he was seized with severe unilateral headache, with loss of appetite, nausea and diplopia. At first the attacks occurred almost every week, lasting a day, and the headache and diplopia came and went almost simultaneously. In the course of a year they became less frequent, but lasted longer, finally persisting for fifteen days. The last attack observed by Dr. Luzenberger lasted twenty days. In this the headache and nausea began in the afternoons and lasted till bedtime. The diplopia, however, was continuous. The attack was accompanied by loud pulsation in the head and the right temporal vein was better filled than the left, although there was no asymmetry of the head. The diplopia was

found to depend upon paralysis of the superior oblique muscle and the eyes presented no other abnormality. The headache was got rid of by moderate doses of bromide, but the diplopia persisted for fifteen days longer and then disappeared without leaving any change in the eyes. The temporal vein also on the side on which it had been distended became normal. Dr. Luzenberger suggests that the underlying cause of the phenomena is a periodical swelling of the cavernous sinus with consequent pressure on the first branch of the fifth nerve and also on the fourth. The case, of course, is similar to others which have been described in which, however, the paralytic phenomena have been the result of an affection of the third nerve.

Electrolysis in the Treatment of Granular Lids. (*Philadelphia Polyclinic*, June 25, 1898.) By Howard F. Hansell, M.D.

Hansell says ophthalmologists have been slow to adopt this method of treatment, perhaps deterred by the expense and frequently unsatisfactory operation of the battery, and also because cures have been obtained in many cases by the use of Knapp's roller forceps. He describes his method, practically that of Snell, as follows: After everting the lid the flat platinum blade is laid upon the conjunctiva. The controller is now turned by an assistant, until the milliampèremeter registers 5. This current is allowed to act for about sixty seconds, and then the switch of the controller is slowly turned back to the starting point. The patient complains of sharp smarting pain and burning in the lid, and a metallic taste in the mouth during the continuance of the current. The pain is not severe unless the blade is removed from the lid while the current of five milliampères is passing through, when it is exceedingly sharp. The lid and the eye flush, and the lacrimation is increased for a few minutes after the treatment, but the unpleasant symptoms disappear in a few minutes. The reaction is decidedly less than that following the application of copper sulphate or silver nitrate, and subsides in a short time. He says he has never found cocaine anæsthesia necessary. As a result of his observations he believes that electrolysis affords a method of treatment, valuable only as an alternative, and cannot be depended upon to permanently cure, and that its use should not be resorted to in the treatment of diseased conditions unless the surgeon has the means of controlling the current. In conclusion he reports two cases where he has used electrolysis for the cure of chalazion or meibomian tumors, hoping to effect their absorption, and to avoid the necessity for operation. In one the result was entirely satisfactory, and in the other only partially so.

OTOLOGY.

Earache. (*Annals of Gynecology and Pediatry*, April, 1898.) By S. A. Leland, M.D.

In this paper the author says, Judging from the number of drumheads seen in the office or clinics, which show upon their surfaces cicatrices or other marks of previous inflammatory trouble, it would seem that the number of calls which come to the general practitioner, where earache is the principal or only symptom, must be somewhat numerous, and the number which receive only domestic treatment are without doubt very much larger than those which come to the point of demanding any professional aid. It is preëminently a symptom of childhood, though no age is exempt, and it is to be regretted that the symptom is often overlooked in infants who are too young to tell the location of their sufferings. That it is also a symptom whose importance is too often underrated, and whose immediate pain and suffering are but the least of its evils, and whose evils, both present and future, can be largely if not wholly abolished by rational treatment. Every practitioner, general or special, ought to become familiar with the appearance of the normal drumhead. Variations in color, lustre, transparency, position, etc., are of great moment in the selection of proper treatment, and are not difficult to recognize. The author goes on to mention a few of the anatomic points in a healthy ear, which becomes more or less obliterated in inflammatory conditions, giving the cue to treatment. He states in detail the process which gives rise to the inflammation, the complications and the final result, which often, in later life if not immediately, lead to deafness, when not properly treated. The course of treatment to be rationally deduced from the pathologic condition is, in the first stage, when there is collapse or closure of the Eustachian tube and a partial vacuum, which lasts from two to eight hours after the onset of earache, to inflate the middle ear with the air douche, which will restore the proper air pressure and perhaps establish the circulation so as to abort or prevent the inflammation. If, however, the case is seen later than six or eight hours after the onset, it will probably have come to effusion and it is then too late to use the air douche, which may drive the fluid farther in, which is to be deprecated. But when the membrane begins to bulge outward in its posterior segment and the earache to increase in its intensity a free incision should be made in its inferior posterior quadrant, near the periphery, so as to give a free vent. In all ordinary cases it is impossible to do any injury by incising at this point. Incision is far preferable to allowing nature to make her own perforation, in doing which the membrane is stretched and a certain amount of necrosis of the thin edge takes place and a round or oval perforation is seen which is not later completely repaired as is a clean incision made with a sharp spear-shaped needle before the drumhead has begun to thin out. It may be impossible later to find the place of incision and the ear is restored nearly if not quite to its normal state. Two cases occurring with measles are cited and the paper is concluded with the injunction that a mild earache is the symptom of an affection which does not take care of itself, but which requires as much, if not more, care and attention than other affections or diseases to which are

given much more thought, and which occasion much more anxiety, and hope the expression "nothing but an earache" will fall into disuse.

KINNE.

Prophylaxis of Otitis. (*Gazette médicale de Liege*, Vol. 10, No. 25.) Dr. Bieufait.

The author quotes Dr. Comby of the Children's Hospital of Liege (?) who has paid considerable attention to the study of ear diseases in children due to measles. Otitis, both single and double, with otorrhœa is a quite frequent complication of measles and scarlet fever which, if neglected, often gives rise to more serious sequelæ as meningo-encephalitis, meningitis or abscess of the brain, therefore the strictest prophylaxis should be enforced. He does not recommend douches, as they are liable to carry germs of the disease into the Eustachian tube and be easily carried into the middle ear. He thinks insufflations of a powder on a spray or any applications that do not require force to carry them over the mucous membrane of the naso-pharynx are the most beneficial. The installation of menthol in almond oil, one part of the former to 40 or 50 of the latter, one drop of the oil in each nostril night and morning or tymol can be substituted for the menthol while unguentum petrolatum may replace the almond-oil applications to the throat or antiseptic gargles should be used in conjunction with these nasal applications. He recommends 2 parts resorcin to glycerine 20 parts, or borax 10 parts to glycerine 20 parts applied to the pharynx several times each day. If there should be any otorrhœa the external ear should be cleansed with a boiled boric-acid solution followed by an insufflation of boric acid, then a small bit of cotton should be placed in the external meatus to protect the ear from the air and keep out any bacteria that might otherwise be carried into the inflamed parts.

NEWCOMET.

PUBLIC HEALTH.

Progress in Public Hygiene. (*Boston Medical and Surgical Journal*, April 21, 1898.) By S. W. Abbott, M.D.

Conveyance of infectious diseases by means of the air.—Dr. E. Germano reports the results of a series of experiments in continuance of those already reported. The later series relate to diphtheria, erysipelas and pneumonia. He reports the following conclusions in regard to the spread of diphtheria: (1) The diphtheria bacillus can resist drying for a long time, both in the membrane, in the tissues and when present in dust. (2) Increased rapidity in drying, even by means of sulphuric acid, does not affect the resisting power of the bacilli either in the tissues or in the dust. (3) The bacillus survives better the more it is surrounded by dust, probably on account of its greater protection from oxidation. (4) When dried com-

pletely, the bacillus retains its virulence until it dies. (5) The air can carry diphtheria while living, by means of dust. With reference to streptococci, he says: (1) The power of surviving the drying process depends largely on the mode in which this is carried out, and the material with which it is mixed. (2) At any rate, its power of resistance is great and can continue for months. (3) The rapidity of drying has no effect on the vitality of the streptococci. (4) The resisting power increases with the amount of material in which it is implanted, and which protects it from the air. With reference to the streptococcus pneumoniæ, to which he attributes pneumonia and sometimes meningitis, pleurisy and acute nephritis, he concludes: (1) The diplococcus is a micro-organism which can resist drying for a long time. (2) It survives better when dried than when moist. (3) As it can under some conditions exist in a dry condition for a long time, but not to the same extent as the *Streptococcus erysipelatosus*, the possibility of its conveyance through the air is established.

The spread of infectious diseases by means of baths and summer resorts.—The following propositions are laid down by Dr. Battlehner, of Carlsruhe, at the close of a discussion by the German Society of Public Health, with reference to public resorts, camp-grounds and places where people congregate in large numbers. (1) It is quite possible that summer visitors may carry and spread infectious diseases at bathing-places and summer resorts. (2) In such places care should be taken to secure a good water supply. The buildings should be provided with good sanitary arrangements. The streets should receive special care, the sweepings should be regularly collected and taken care of, and the foul water and surface drainage should receive attention. (3) Where bathing tanks are in use, the water should be frequently renewed and examined. (4) Sanitary police regulations should be enforced as in other places. (5) Notification of infectious diseases should be required of all physicians as a means of preventing their spread. (6) Disinfecting apparatus and well-instructed attendants should be provided. (7) If there is no hospital a separate room should be provided for persons ill with infectious diseases. (8) There should also be a house for the reception of dead bodies.

The contagion of sporadic dysentery.—During the past fifty years dysentery has gradually diminished in its destructiveness throughout New England and the severe epidemics of the period from 1840 to 1870 have been followed by a similar period of comparative immunity from the disease. In 1849, an epidemic year, dysentery attained the very high death rate of 25.4 per 10,000 of the living population in Massachusetts. In the five-year period 1861–65 it had a mean death rate of 7.8 per 10,000; but from that time onward it diminished with considerable uniformity until the five-year period 1891–95 when the death rate from this cause was only .9 per 10,000. During the past two years, however, there has been a slight increase, and local epidemics have been reported from Brockton, Leominster, Marlboro, Yarmouth and other places. In a recent journal Dr. Letulle

cites several cases to show the liability to a mistaken diagnosis in this disease. In one a laparotomy was performed for cancer of the intestines, when a dysenteric ulceration revealed itself. In other cases which occurred at a hospital in Paris, one pronounced cancer of the rectum proved by autopsy to be dysentery, another case, entered as influenza, was shown upon autopsy to be one of dysentery, etc. Dr. Letulle made inquiry with reference to the possibility of contagion, and found that in one ward of twenty-five beds only one or two enema syringes were in use, and that two of the patients having dysentery had probably been treated with the same apparatus. He goes on to affirm that dysentery is contagious not only in Algeria and other warm countries, but also in France. Dr. Lemoine has also published a series of cases in support of this view. These cases demonstrate the necessity of adherence to aseptic principles in the treatment of this disease.

The spread of diphtheria.—The following conclusions are from the final chapter of Dr. Newsholme's new work upon "Epidemic Diphtheria," being a review of its prevalence throughout all civilized countries: "If the occurrence of pandemics of diphtheria is governed largely, if not chiefly, by meteorological conditions over which we have no control, what scope is there for the intervention of preventive medicine? Before answering this question, let it first be clearly stated that we must have the truth at any cost. If the statement of the truth by implication means that our preventive measures are but Canute-like attempts to stop the inflowing tide, still it is well that the truth should be known. But this is not a correct view of the case. Diphtheria is spread chiefly *by personal infection.* This personal infection is immensely more potent in epidemic than in inter-epidemic years—a fact which should lead to redoubled efforts to prevent personal infection during such epidemic periods, rather than to a fatalistic inertia. Similarly redoubled efforts are required to prevent ground-air from gaining admission into houses, and to render more wholesome the soil in districts in which diphtheria has become endemic. How this can be done in towns, how the soil can, without more open spaces than are obtainable in most of our great cities, be made to resume its virgin salubrity and purity cannot be stated here. It is one of the greatest problems of public health. But to assume that because we do not yet know how to exterminate diphtheria, or because we cannot hope in our day to be entirely successful in preventing its spread, it is therefore useless to attempt anything, would be as unwise as it would be for a city council to dismiss their fire-brigade staff and dispose of their fire-preventing apparatus because the staff had not been successful in at once extinguishing every fire, or because the city council were impressed with the fact that the present appliances for extinguishing fire are of a very imperfect character."

Kissing the book.—The danger incurred by kissing the Testament in a court of law is emphasized by a statement of Dr. Lys, medical officer of health to the Wareham Rural District Council. In his annual report just

forwarded to the Council, Dr. Lys says: "The death of a constable at Coombe, in the parish of Langton Matravers, in January, was registered as due to acute ulceration of the throat (diphtheria), and there is every reason to attribute his fatal illness to the dangerous practice from a sanitary point of view, of 'Kissing the Book' on being sworn. He had attended the Petty Sessions at Wareham, and given evidence shortly before the commencement of the attack. The sanitary state of the cottage was satisfactory and the water supply was proved by analysis to be excellent."

PRACTICAL NOTES.

Vomiting of Pregnancy Treated by Oxygenated Water.—Gallois and Bonnel (*Bull. Gen. de Thérap.*, March 23, 1898) reported to the Société de Thérapeutique the results of this treatment. Hayem and Hinard had advised inhalations of oxygen for the same purpose; but as the oxygen could not always be procured in gaseous form, they tried water containing ten or more volumes of oxygen gas (peroxide of hydrogen, H_2O_2). They administered a tablespoonful in a liter of water, given with wine and drunk during meals. They note that two tablespoonfuls of oxygenated water to the liter leads to an unpleasant metallic taste. They do not think the cure results from suggestion, because it did not follow when the dose employed was a teaspoonful to the liter. As a rule, cure is complete in two or three days. Vomiting due to gastric disease is not improved, nor has the treatment any affect on heartburn. In pure cases of vomiting of pregnancy they had only two failures. The method was also tried with success in the vomiting of phthisis.—*British Medical Journal.*

How to Treat Sick-Headache.—Analgesine, says Dr. Hirtz in the *Journal des Praticiens* of December 11, 1897, is unquestionably a medicament of the first order. Huchard experimented with it as an antipyretic; but it is especially an analgetic, and Germain Sée used it commonly to combat pain. The dose is, so to speak, individual. Some subjects are relieved by a dose of four grains; others require fifteen grains; and sometimes thirty or forty-five grains are necessary to obtain recovery.

Patients should be warned against the abuse of this drug, which has become public property and is frequently taken without the advice of a physician, as it gives rise occasionally to symptoms of veritable poisoning. Analgesine is more easily tolerated when combined with eight grains of sodium bicarbonate. It may also be administered hypodermically when the condition of nausea dependent upon the headache is too painful and too pronounced to allow of the ingestion of any liquid. It may be given in

enemata, from thirty to forty-five grains of analgesine with six drops of laudanum being sufficient for four injections.

Before the employment of analgesine, says the author, caffeine was frequently prescribed, either in potion or in subcutaneous injection, and the following formula by Huchard may be recommended:

℞. Caffeine,
Sodium benzoate, āā gr. dclx.
Peppermint water, ℥viij. M.

A teaspoonful is to be given every two hours until four teaspoonfuls have been given each one representing four grains of caffeine. The same dose will be contained in a Pravaz syringe, with the following formula for hypodermic injection:

℞. Caffeine, gr. xxxviij.
Sodium benzoate, gr. xliv.
Distilled water, q. s. ad ℥ijss. M.

If the sick-headache persists after the administration of analgesine, other drugs may be tried, such as acetanilid. They should not be given except in divided doses, in small capsules containing from three to four grains five or six times a day. Care should be taken not to exceed thirty grains a day.

Phenacetine has the advantage of being almost non-toxic and of provoking much more rarely than analgesine eruptions and symptoms of intolerance. Capsules containing four or five grains may be given four or five times a day.

Exalgine does not give such brilliant results in sick-headache as in the trifacial neuralgias. Four grains may be given at a time, but this dose should not be exceeded, and its action should be carefully watched, as it gives rise to accidents.

Lauder Brunton, says Dr. Hirtz, recommends sodium salicylate combined with potassium bromide. The amount is twenty-three grains of the former and thirty-eight grains of the latter, given in four doses.

Immerwahr, Lewy and Schumann have found in methylene blue a very efficacious remedy for sick-headache, especially the form called angeiospastic. They gave it in doses of a grain and a-half four times a day, combining it with a nutmeg as follows, in order to avoid vesical irritation.

℞. Methylene blue,
Pulverized nutmeg, āā gr. jss. M.

This quantity will make one capsule, about four of which may be given a day.

Migrainine, which is considered by Schumann one of the best remedies for sick-headache, is a combination of antipyrine and caffeine as follows:

℞. Antipyrine, 89.40.
Caffeine, 8.20.
Citric acid, 0.56. M.

Aconitine is sometimes successful when other nervines fail. It is prescribed in globules only, each containing four one-thousandths of a grain, of which two a day may be given.

Guarana contains guaranine, which is identical with caffeine. It is given in a powder in doses of from eight to thirty grains dissolved in water.

Seguin, who was a great advocate of the ocular theory of sick-headache, thought it was frequently due to defects of refraction, and he recommended the employment of mydriatics and the correction of the muscular defects by wearing proper glasses. As an internal remedy, he recommended the extract of cannabis indica, to be given three times a day in pills, each containing a fifth of a grain, which amount may be progressively increased to three grains. Gradle, of Chicago, prefers the tincture of cannabis in doses of from twenty to twenty-five drops twice a day, at an interval of six hours.

Ophthalmic sick-headache during its painful stage is amenable to the same treatment as common sick-headache. Other indications, however, present themselves. This form of sick-headache is associated with nervous affections, such as neurasthenia, hysteria, certain mental troubles, epilepsy, tabes and general paralysis. The most useful treatment, and the only one really efficacious, given in the interval between the attacks in order to delay their recurrence, is with the bromides. Charcot and Fere, says Dr. Hirtz, laid great stress on the services which this treatment rendered. Potassium bromide, sodium bromide or a mixture of several bromides may be prescribed in amounts increased from thirty to ninety grains in twenty-four hours.

Ophthalmoplegic sick-headache sometimes resists all treatment. During its painful stage antipyrine, phenacetine, exalgine, etc., may be employed. The paralytic stage is frequently rebellious to all therapeutic intervention, and this is explained, says the author, by the anatomical and pathological changes. In one case Gubler found the oculo-motor nerve surrounded by an abundant exudation, with thickening of the pia mater. In a case coming under Weiss's observation the nerve was buried in tuberculous masses; in another the nerve was pressed upon by a fibro-chondromatous tumor. In spite of these facts, which baffle all attempts at cure, either the iodide or the bromide treatment should always be tried. Locally, energetic revulsives may be tried under the form of blisters, the cautery or even the seton. Not only must the attacks be cured, but, what is more difficult to accomplish, their recurrence must be delayed, in order to render them less frequent, and, if possible, to cause their disappearance. To do this, the various causes which lead to sick-headache should be taken into consideration. The patient should be put upon a strict diet; he should avoid all indigestible food, alcoholic drinks and liquors, the smallest doses of which bring on an attack of sick-headache in predisposed subjects. The majority of recoveries, according to Dr. Hirtz, are due to extreme sobriety.

Debout recommended the following as a prophylactic measure :

℞. Quinine sulphate, gr. xlv.
Pulverized digitalis flowers, gr. xxiij.
Syrup, q. s. ad M.

This quantity will make thirty pills. The dose is a pill every night for a period of several months.

In arthritic, rheumatic and gouty persons, the following treatment is recommended by the author. The patient is put upon a strict diet; nitrogenous or indigestible food, especially vegetable, is not allowed at night, and water or a drink like weak tea may be taken. In the morning, before eating, Carlsbad or Tarasp water, heated to about 104° F., may be taken, or else Vichy water. Every night, before supper, a pill containing the following mixture may be taken:

℞. Quinine valerianate, gr. xv.
Extract of colchicum, gr. iij–vij.
Extract of digitalis, gr. iij.
Extract of aconite, gr. jss. M.

This quantity makes ten pills.—*Therapeutic Gazette.*

Nervous Vomiting.—Meisl (*Ther. Woch.*, September 19, 1897) says that nervous vomiting produced by disturbances of the nervous system, both central and peripheral, without external irritation or anatomic lesion, is a purely functional disorder; it occurs without any over-exertion and is independent of the quality and quantity of the ingested food. It varies in relation to the different kinds of diet, and is often absent when particles difficult of digestion have been eaten, and may be present when only suitable food has been taken. For treatment he recommends the following:

℞. Menthol, gr. j.
Sodii bicarb., gr. c. M.
Ft. in caps. No. xii.
S. One capsule three times a day.

In severe cases it may be necessary to give suppositories, each containing one-third grain of belladonna and one-half grain of codein. Oxalate of cerium, preparations of bismuth, and alkalies in large doses are also recommended. In the painful form papayotin renders good service. It is given in combination with soda. With some patients the painting of the pharynx with a ten-per-cent. solution of cocaine results in a cure. Treatment directed to the strengthening of the body will be of help in all instances.—*Medical News.*

The Treatment of Epidemic Cerebro-Spinal Meningitis.—In a discourse on the above subject, delivered before the Society of Hospital Physicians on September 15, 1897, Dr. Béla Angyán (*Ung. med. Presse*, 1897) outlines its treatment with special reference to his employment of corrosive sublimate. As there is no specific remedy for this disease, treatment

must be symptomatic. As antiphlogistics, venesection, local blood letting, ice applications, and finally mercurial inunctions are recommended. Leeches, according to the speaker's experience, lessen the headache and the nervous manifestations; he recommends blood letting only in the so-called hyperacute cases, and even then only in strong individuals and in the beginning of the disease. The patients do not bear cold baths well, and a resulting collapse is not infrequent. Cold douches applied to the head and back of the neck for several minutes every three or four hours is very beneficial, especially in attacks of soporous coma. Prolonged ice poultices produce a marked antiphlogistic effect; an ice bag should be applied to the head and nape of the neck, and the Chapman coil to the spine, but only so long as they are borne with comfort by the patient. The pain is lessened, the nervous manifestations are allayed, and often a quiet sleep supervenes. The mercurial treatment in the form of calomel or inunctions, which the French were first to recommend, continues at the present day to play an important rôle in the therapy of epidemic meningitis. Narcotics are to be used with great caution, and only in those cases marked by intense nervous excitability, by uncontrollable vomiting or by marked wakefulness. They are contra-indicated when somnolence, lethargy or depression of the nervous system exists, or when collapse is to be feared. The indication for excitants and analeptics is restricted to a very narrow field, chiefly to cases in which narcotics are contra-indicated. Vesicants and the like are not to be used. Since in epidemic meningitis the brain and cord are subjected to great pressure by the accumulation of cerebro-spinal fluid, it would seem *a priori* that Quincke's procedure—aspiration of the cerebro-spinal fluid by lumbar puncture, to relieve the pressure on the brain and cord—is a rational one. Warm baths, recommended by Aufrecht, seem to have a favorable influence on the heart's action, but no conclusions should be based on the small number of cases thus far treated. The speaker confines his treatment to the use of the ice bag and the subcutaneous injection of bichloride of mercury. The sublimate, given hypodermatically, is more rapid and energetic in its action; entering the circulation, it has an antimycotic effect on the toxic blood serum. Injections of one centigram in adults, and of from 0.005 to 0.05 gm. in children, are made daily along the course of the spinal column. In acute cases they are repeated as long as fever continues and the headache, backache and stiffness of the neck remain; in subacute cases they are repeated as long as exacerbations exist. In this manner he has treated twenty-seven cases, acute and subacute—six females and twenty-one males, ranging in age from three to thirty years. Nineteen, or 70.3 per cent., recovered. As to the number of injections, individual cases varied from four to twenty-four. The injections were well borne by the patients; in one case after the fourteenth injection there resulted slight salivation; in six others there was diarrhœa unaccompanied by salivation. The following results from the injections were observed: 1. In most cases after the second or third injection the mind became

clearer, the excitability was allayed, the headache was less marked, and the patient could sleep. 2. After five or six injections clear cerebration usually reappeared, and sleep became quieter and was of longer duration. 3. After seven, eight or nine injections the retraction of the head was less marked and gradually disappeared; the fever diminished and finally subsided. 4. The sublimate injections seem neither to lengthen nor to shorten the progress of the disease. 5. The sublimate seems, after employment for several days, to check the formation of products of inflammation. In confirmation of this are those cases seen at autopsy in which a small amount only of inflammatory product could be demonstrated; and even this was more often fibrinous than purulent in character.—*Medical Record.*

A Simple Method of Curing an Ingrowing Nail.—Tardif (*Anjou Médicale*, February 1, 1898) says that he has been able to cure all cases of ingrowing nail, without recourse to the knife. He proceeds as follows: With a flat probe, or a match, he slips a bit of cotton between the edge of the nail and the inflamed flesh. Another strip of cotton is put along the outer margin of the ulcerated area, and the space between these two strips of cotton, and which is occupied by the ulcer, is thickly powdered with nitrate of lead. The whole is covered with cotton, and the toe is bandaged. The dressings are repeated the following day, and every day until the incarcerated edge of the nail is plainly visible. Usually four or five dressings suffice. Then with patience the edge of the nail is lifted away from the flesh and a bit of cotton is introduced under it, to keep it up. As it grows it will gradually take its proper position above the flesh, this having in the meantime shrunk and shriveled by reason of the applications of lead nitrate. The lead is to be discontinued as soon as it appears that the exuberance of the fleshy bed of the nail has been overcome. The difficulty seldom recurs. If this does happen it is necessary to repeat the treatment from the beginning.—*Medical News.*

Rectal Surgery.—Matthews, of Kentucky, in a paper upon this subject, written in the author's characteristically terse and practical style, announces his views as follows:

"In order that some practical points may be embraced in this paper, I will take the liberty of giving some consideration to most of the important diseases of the rectum which require surgical treatment. First in the list, in a practical way, should be *hemorrhoids.*

The writer will be excused from discussing the *palliative* treatment of any of these rectal affections, first because the time given would not permit of it, and secondly for the reason that he can scarcely recall a single rectal affection which calls for palliative treatment. To the contrary, he believes that all of them should be treated surgically.

Referring to hemorrhoids, it is best to give but two divisions, viz., external and internal. The external variety, of course, is formed outside the

sphincter muscle. It may appear superfluous to so state, but I do it purposely, for the reason that in many, very many cases of inflamed external piles it is the common practice with physicians to try to place them by force in the rectum. I do not say back in the rectum, for they did not have their origin in the rectum, never were there, and no effort of course should be made to push them in. Of whatever kind (external) or whatever size, they should be allowed to remain outside the sphincter muscle.

Suppose, therefore, a case of this kind is under observation, what shall be the treatment? Mr. Ericsen said, "All external piles should be cut off." No better injunction can be given now. You will permit me to call your attention to the difference between cutting an external pile off and "letting out the clot of blood described by most authors. The latter plan in my opinion should never be indulged in; far better leave nature to reabsorb the clot than to add to the inflammatory process by doing a half job. All external piles should be cut off."

Internal hemorrhoids is a much more serious condition. In a matter of diagnosis I desire to say what may appear to you to be a very contradictory statement in so far as authors are concerned, viz., every disease or pathological condition in the rectum can be detected with the finger, except one—internal piles in a quiescent state. I say this is in contradiction to the authorities who direct that a digital examination be made in order to detect piles, and that the speculum be used in detecting any special or all manner of disease in the rectum.

What shall be done with the internal piles? It would not be dogmatic to say that there is but one thing to do—operate—for no local application, as ointments, etc., ever cured an internal pile. Should internal hemorrhoids be operated on in the inflamed state? By all means, for thereby you stop the inflammatory process and remove the inflammatory deposit, at the same time cure the patient of the disease.

What is the best operation for internal piles? In the experience of the writer, covering twenty years and several thousand operations, he unhesitatingly says that the ligature is the safest of all methods. Next to this plan, of course, is the clamp and cautery. The injection of acids, etc., into the pile tumor is dangerous, unsurgical and not attended by radical results.

Fistula-in-Ano.—Fistula-in-ano should receive more serious consideration from the profession than it does. A more destructive local condition can hardly be imagined. Beginning, as it always does, with an abscess, it is fraught from its start with danger, both constitutional and local. If physicians would bear this in mind and at the very incipiency of the trouble establish free drainage, the comparative number of cases of fistulæ would be greatly reduced.

I have taken occasion to dissent from the division of fistula-in-ano as given nearly universally by authors. It is of very little significance to say that a fistula is an external or an internal one, and it is simplified not at

all to add that the sinus may be complete. What is of much more purport is to indicate whether the condition is going to do little or much harm. The writer has therefore divided these fistulæ into progressive and non-progressive types. It will be observed that there is a class of fistulæ which is limited to a narrow channel, said channel being lined by a tough, cartilaginous membrane miscalled pyogenic, which can be left for an indefinite time because non-progressive; another class, where the pus formation and disintegration of tissue are very rapid, which should be called progressive, and which demand immediate attention. To the ravages of this latter class I have often seen one or both buttocks destroyed, the perineum involved, and the peritoneal cavity encroached upon. Patients suffering from this condition often die from a slow or rapid sepsis.

In a matter of diagnosis authors lay great stress upon the matter of finding the internal opening of a fistulous track. How very unnecessary this injunction is can be estimated when it is affirmed that if an external fistula exists, it calls for an operation, and that during said operation the internal opening, if any, will be discovered. And yet I have known surgeons to refuse to operate because the internal opening could not be detected.

As to the cure of fistula-in-ano, it must be positively asserted that it is a surgical disease and must be cured by surgical means. The text-books on surgery very inadequately describe the operation. Copying from one verbatim, the directions are as follows: "Insert a grooved director into the external opening, push it into the bowel, catch the distal end on the finger, pull it out of the anus, and then divide all the tissues remaining on director."

Such a procedure would not cure one in fifty cases. Each individual sinus must be traced and freely divided, the bottom of all channels freely cut through or curetted and the edges trimmed closely. Occasionally we find cases in which union by first intention can be secured by bringing the edges together, but these are the exceptions. Allingham once said to me that it required more dexterity and delicate surgery to cure a complicated case of fistula-in-ano than any other condition that he knew of. I quite agree with him.

Prolapse of the Rectum.—In regard to prolapse of the rectum, the writer desires to say that he regards it as a very infrequent condition in the adult. Twelve cases will cover all that he has seen in twenty years' experience. In the infant, for anatomical reasons, it is much more frequently met with.

In the adult it always calls for surgical treatment. The methods proposed have proven very unsuccessful. The linear lines drawn by the thermo-cautery, suggested by Van Buren, are very inefficient. The taking out of elliptical pieces and suturing the edges is a slow and not very effective operation. The application of acids to the surface of mucous membrane is unsurgical and should not be thought of. The writer has proposed and practiced a free circular incision around anus, and drawing down the

prolapsed membrane, which is superfluous, and removing it and then stitching membrane to the true skin.

Pruritus Ani.—It would appear at first thought that pruritus was an affection to be treated medically and not surgically. But I am sure that every physician here has been convinced of the futility of such methods. In all cases, especially of long standing, where the so-called "scarf-skin" has formed, the most efficacious plan will be found to be a thorough application of the thermo-cautery, under chloroform, or what is better, a clean dissection of all the shin involved.

Fissure of the Rectum.—Fissure of the rectum I believe to be a misnomer, because it is impossible for the pouch of the rectum to become fissured, as is intimated by the use of the term. Fissure of the anus is a much more appropriate term.

This affection, too, I believe, should call for surgical and not palliative treatment. It is so simple of cure by gentle divulsion of the sphincter muscle that it looks cruel to subject a patient to many weeks of treatment by burning local applications. If the physician is adverse to giving an anæsthetic for this purpose, let him practice moderate stretching several times with a small divulsor and a rapid cure will be effected in the greatest number of cases.

A distinction should be drawn between a fissure of the anus and an irritable ulcer of the rectum or anus. For the latter, free and rapid divulsion with thorough curettement should be the treatment.

Ulceration of the Rectum.—The writer desires most emphatically to dissent from the view that benign ulceration of the rectum is of frequent occurrence. To the contrary, he is on record as believing that it is one of the rarest conditions found in this portion of the gut.

I would respectfully ask, especially of those who have given much study and observation to diseased conditions of mucous membrane anywhere, if it is not a rare thing to notice an innocent ulceration of the same? If, on the other hand, a well-defined ulcer is observed with elevated edges and a hardened base, is it not invariably suspicioned as being of constitutional origin? Therefore, I would beg to say if such condition is found in the rectum, the question of an innocent origin is at once dissipated and the cause sought from conditions much more serious. Among the list of such causes are syphilis, cancer and tuberculosis.

Valuable time indeed would be lost if such diagnosis were neglected. In order then to present succinctly my subject, I will take this proposition as granted. How shall we deal with ulcerations the result of these separate causes?

1. Tuberculosis.
2. Syphilis.
3. Cancer.

1. *Tubercular.* It is now a well-recognized pathological fact that tuberculosis may select any tissue for invasion. A local lesion early recog-

nized, diagnosed and properly treated will oftentimes save the patient from general tuberculosis. The rectum is a favorite seat for such deposit. Its nature is so insidious that it is seldom detected early and if seen is taken for something less serious. Being local in character it precedes any constitutional symptoms, hence is easily overlooked. The microscope is of much diagnostic aid in the affection.

When a diagnosis is once made, there should be no hesitancy in applying the proper treatment. Local remedies are perfectly nil in their effect and such methods are but temporizing with the disease. It should be recognized that only surgical means will avail anything. The curette and knife are the only remedies to be thought of. The idea, of course, is to get rid of the diseased, infectious tissue. The same rule that is observed in removing a malignant growth should be practised in operating for a tuberculous ulcer, viz., excise all the affected tissue. For this reason I much prefer the knife. The curette is a most excellent adjuvant to the knife, but when used alone is ineffectual. Indeed the actual cautery will be found of greater service in eradicating this diseased structure than the curette.

2. *Syphilitic.*—The writer is on record as believing that 60 per cent. of strictures of the rectum are caused by syphilis. This is the percentage claimed by him and so published ten years ago. He has no reason to-day to retract the assertion. He is glad to record the fact that he has been in receipt of many letters from prominent men in the profession, both in this country and in Europe, affirming the proposition.

This was stated with some emphasis at a time when syphilis—secondary—was regarded as a small factor or no factor at all, in causing ulceration and stricture of the rectum. He can recall the time when most eminent writers thought that the only manner in which syphilis could play a part in producing ulceration of the rectum was by the extension of chancrous pus. Instead of accepting this theory, the writer has often asserted that chancrous pus can in no manner produce syphilitic ulceration of the rectum. To the contrary, it is by secondary deposit alone that syphilis manifests itself in the rectum and upon this theory only can a proper treatment be afforded.

I know that I will be pardoned here if I offer an explanation of certain quotations of a distinguished friend of mine in the East, who persists in saying that I affirm that 99 per cent. of the cases of stricture of the rectum are caused by syphilis. In the writer's book on Diseases of the Rectum, Anus and Sigmoid Flexure, will be found these words: "If a case presented, and after a thorough examination it could be affirmed that it was not cancer, in ninety-nine cases out of one hundred it would prove to be syphilis." In explanation it is argued that syphilis and cancer are so akin in symptoms, both clinical and general, that it is often an impossibility to diagnosticate between them; syphilitic stricture is unlike all other forms of stricture save cancer. Therefore, if it proves not to be cancer, it must of

necessity be syphilitic. I am sure that you can see the difference between such a statement and one affirming that ninety-nine out of every hundred cases are syphilitic.

What, then, are we to do with syphilitic ulceration and stricture of the rectum? Permit me to say that after the disease assumes the fibrous nature which constitutes a stricture, it is utterly incurable by either local medication or by general means. There is but one course to be pursued looking to a radical cure and that is the entire resection of the affected tissue. The question then arises, can this be done? Unfortunately, the case in which such a procedure could be practised would be a rare one. What course is left? Nothing save proctotomy and colostomy, either one of which is only a palliative remedy. This is indeed a melancholy class of patients, as incurable as cancer, with the disadvantage over the latter that life is for a much longer period made a thing of much misery and suffering.

3. *Cancerous.*—Cancer is yet the "horror of horrors" to the medical man. In its presence we bow submissively in ignorance and acknowledge our inability to cope with the monster. Located in certain regions of the rectum it assumes new features of torture and soon evades the limits of surgical interference. And yet surgery has done much in the last decade or two looking to the eradication of this terrible disease.

It times past it would have been thought both unwise and unsurgical to have attempted the removal of the entire rectum for cancerous or other disease. To-day it is often practised. Let us for a moment consider whether such attempt is justifiable, and if so, how often? No one denies the anatomical and surgical fact that the rectum can be removed in its entirety, but under what conditions should such surgery be advocated? In this day of performing great surgical feats, there is such a thing as overstepping the bounds of all reason in order to show great dexterity. Because, forsooth, one stomach was removed and the patient lived, is no reason that a search should be instituted for stomachs to remove.

It is a principle in surgery that unless all tissues involved in the cancerous disease can be removed, an operation is useless. It is a well recognized fact that the rectum is contiguous to a large distribution of glands and lymphatics. Cancer situated above and not involving the sphincter muscle is often an insidious disease. When the mass has so far extended as to embrace the whole rectum, it is safe to infer that the infiltrative process has so extended that it has embraced structures which cannot be removed; hence to resect simply the mass in sight would avail nothing. Much better to leave such a patient to the tender mercy of an opiate than to further wreck life by a fruitless major surgical operation.

If, on the contrary, the growth can be circumscribed, and the assurance had that all diseased structures can be removed, then resection, or rather extirpation, should be advised.

I desire to say in this connection that the operation is much more preferable than to perform a colostomy in such a case. The latter can only be

palliative, if that, while the former anticipates a radical cure. There have been a number of methods proposed for accomplishing the removal of the rectum, but the writer prefers to avoid such operations as Kraske recommends, if a lesser one will accomplish the purpose. I have practised removing portions of the rectum by the simple circular incision and a careful dissection of the gut with the fingers. In a few instances I have removed the coccyx, as it materially increases the field in which to work.

Walker, of Detroit, and Tuttle, of New York, as well as Alexander, have, in my opinion, improved on Kraske's method. It is a very serious question to decide whether this operation should be recommended. I must say that but very few cases have fallen under my observation where I thought it justifiable to remove so much of the rectum. Infiltration and glandular enlargement must certainly take place before the whole rectum can be blocked with or by a malignant growth. Upon several occasions I have had to abandon the operation because of this fact, and regretted that I had ever begun. I would much prefer to remove the rectum for syphilitic disease than for cancer.

Disease of the Sigmoid Flexure.—Before closing you will permit me to call your attention to a non-surgical subject that has interested me for a long time, viz., disease in the sigmoid flexure. For want of a better term I have styled the trouble sigmoiditis. This term should be disassociated from the secretion neurosis of the colon, such as pseudo-membranous colitis, colitis tubulosa, membranous colitis, etc., and from a syphilitic or tubercular manifestation in the colon. O'Bierne, of Dublin, demonstrated that the flexure and not the rectum was the receptacle of the fæcal mass; that by an anti-peristaltic movement the fæces were carried back and deposited in the flexure if not voided. My investigations have proven this to be true. The water is rapidly absorbed and the dried fæcal mass is left in the flexure to irritate. As a result we have a congestion, inflammation and ulceration of the flexure. These patients suffer from a discharge of mucus or blood, or both, and ultimately with a muco-purulent discharge. This condition is easily mistaken for a flux or cancer. They can be quickly relieved by an early diagnosis and proper local treatment. Internal administration of medicine does no good, but a great deal of harm. The instruments to be used are a bulb syringe and a Wales bougie. The agents are large quantities of warm water, or boric acid water, fluid hydrastis, iodoform oil, etc. They will often clear up as if by magic.

I had hoped to consider the subject of the surgical treatment of ano-rectal imperforation, but my paper is already too long.—*Matthews Quarterly Journal; New York Polyclinic.*

Professor Neisser's Method of Treating Gonorrhœa.—Neisser, of Breslau, states that even the best method of treating gonorrhœa proves unsuccessful unless a remedy be employed which will destroy the gonococcus without giving rise to changes in the mucous membrane and increase of the

inflammatory process. He gives the first place to protargol, a new organic silver compound, which has the advantages of not being precipitated by albumin, sodium chloride, or alkalies, of being far more penetrating than other silver preparations, and of being practically free from irritation, and, therefore, available in the earliest stages of the disease. Owing to its possession of these properties it is adapted for prolonged injections, the solution being kept in the urethra for thirty minutes, and the patient being spared the trouble of repeated injections. It is Neisser's custom to resort at once to injections of protargol solution (one quarter to one per cent.) as soon as the presence of gonococci has been determined.

At first three injections are given daily, the fluid being retained in the urethra for five minutes during two of the injections, and for thirty minutes during the other. Later one prolonged injection is sufficient.—*Dermat. Centralbl.*

Suppository Doses for Children.—*Pædiatrics* for May (quoting from *Médecine moderne*) calls attention to the many advantages of rectal medication in children—viz., lesser irritability of the rectum than that of the delicate digestive organs, emotional antagonism of the child, etc. Rectal absorption is perfect, but slower than that of the stomach and intestines, whence the dose may be as large as that given by the mouth and gradually increased. If the drug is dissolved in the suppository its effect is attained gradually. The following are recommended as the maximum doses of certain potent remedies for children:

Opium.—Pulvis opii may be given in suppository in doses of one sixty-sixth of a grain for each year of the child's age, and this dose may be repeated in severe cases every two hours. Toxic symptoms should be carefully watched for and the use of the remedy discontinued on their appearance. These doses are small ones, and may be increased.

Aconite shows its action in children only in large doses. We must therefore administer it in repeated small doses to obtain its effect. For example, we may give one to two drops of the tincture for a suppository in a year-old child, and increase the dose up to ten or twelve drops in twenty-four hours for each year of life.

Belladonna acts as an excellent sedative in cough, and exerts a very favorable influence on the muscle fibers of the intestine. We may use one-sixth of a minim of extract of belladonna in twenty-four hours, divided into three or four suppositories, for every two years of age.

Digitalis.—Powdered digitalis is with difficulty absorbed by the rectum. The tincture should therefore be used. The maximum dose for each year of life is four drops, divided into two suppositories.

Caffeine is usually injected subcutaneously. It may, however, be administered in a suppository with equal parts of benzoate of sodium. For example, one grain and a half to a suppository, using two daily for each year of the child's life.

Quinine is best given in suppositories. The daily maximum dose is two to three grains and a third, in two suppositories, for each year of life.

Antipyrine may be given in the same dose.

Salicylic acid.—Seven grains and three quarters for each year of life, in divided doses (three or four).

Nux vomica.—One-sixth of a grain for every two years, in three suppositories. Strychnine should be given only to children over ten years of age.

Mercury should only exceptionally be given *per rectum*, and then only in the form of calomel, three quarters of a grain in a suppository for each year of life.

Iodine and its preparations are exceptionally well borne by the rectum and fully absorbed. Three grains for each year of life, in two suppositories, is the maximum dose; three-quarters of a grain if it is to be continued.

Bromides should be given in the same doses, except in severe spasm, when we may give fifteen grains for each year of life, in two suppositories rapidly following each other; for example, in laryngismus stridulus.

The foregoing is a general review of the drugs mainly used in rectal medication in children. Where tolerance has been established the doses should be increased.—*New York Medical Journal.*

Salicylic Acid in Pneumonia.—De Becker (*Ann. et Bull. de la Soc. de Méd. d'Anvers*, An. LX., February-March) has for the last two years treated pneumonia with salicylic acid. The first case in which he tried it was that of a little girl, aged four years, with pneumonia of the left apex and a pneumonic focus at the lower angle of the right scapula. During five days he treated her with digitalis, blisters, etc., but the physical signs did not alter, dyspnœa became worse, and weakness increased. He then changed the treatment to 10 centigrammes of salicylic acid every hour, and after the first doses the tongue became clean and a cough developed, which cleared the lung in twenty-four hours. Three days later the patient's elder sister contracted pneumonia, but the attack was cut short in two days by the same treatment. De Becker has since treated in the same manner twelve cases of acute pneumonia, all of which were rapidly cured, except one in which death was due to the sudden onset of meningitis. He explains the effect of the salicylic acid partly by its antiseptic action, partly by its producing dissociation and early liquefaction of the hepatization products, and by its setting up cough, sometimes accompanied by violent efforts. The expectorated material is liquid and to the naked eye appears to consist of nothing but blood. The acid therefore, he thinks, does rapidly what Nature often has a great difficulty in doing, taking so long about it, moreover, that the heart fails under the prolonged strain to which it is subjected. As regards dosage, in the case of children 10 centigrammes are given every hour, or in the very young every two hours; in adults 50

centigrammes every two or three hours; in the aged the same amount every three or four hours, regard being had to the state of the heart. The dose must be adjusted to the condition, the guiding symptom being the expectoration; as soon as this is free the dose should be diminished. De Becker finds that the acid is best given dissolved in a little hot water, a good quantity of jam or honey being added. Coffee, chocolate and even diluted milk are also good vehicles. Cardise disease and extreme weakness are contra-indications. He believes that if salicylic acid is given early (first or second day) it will be found a true abortive of pneumonia.—*British Medical Journal.*

The Treatment of Infantile Diarrhœa.—With the advent of the hot season physicians will once more meet with a large number of cases of more or less severe diarrhœa affecting young children, and in many instances will come face to face with such grave symptoms that the malady will become in their eyes one of the most serious which they have to treat. Further than this, the mortality from the diarrhœal affections classed under the head of cholera infantum is so large that we must all take great interest in any measures which look towards the diminution of its severity. During the past year a valuable practical paper was published by Langford Symes in the *Dublin Journal of the American Sciences.* He divides the diarrhœas of children into those which are dyspeptic and those which are infective. These dyspeptic diarrhœas usually arise from the digestion of foods unsuited to the digestive apparatus of young children, or their use in quantities over and above that which the stomach and intestines can utilize. The infective diarrhœas, on the other hand, are produced by the ingestion of milk or other articles of food which have undergone decomposition changes or which contain infectious micro-organisms. In either case the chief symptoms, as is so well known, consist of restlessness, abdominal pain, frequent grassy-green and watery stools containing now and again small amounts of mucus and possessing a peculiarly foul-smelling or mousy odor, which is peculiarly characteristic. If the diarrhœa persists, the child, even in a very short time, suffers from thirst, a pinched face and pursed expression about the mouth, with sunken eyes and cold skin. Sometimes, too, there may be nervous symptoms manifested in twitching of the hands and associated with depression of the fontanel.

Where the cases are more prolonged prior to the development of serious general nervous symptoms, the patient loses weight and is sometimes thought to have consumption of the bowels. The stools are particularly offensive, and in nearly all cases contain undigested coagula of casein. Quite frequently, because of the constant tenesmus and straining, prolapse of the rectum takes place. Finally, that state which has been called spurious hydrocephalus, a condition of depression of the fontanel, pinching of the face, and cool skin, apathetic eye, and lastly coma, is developed. These conditions can be avoided in a certain proportion of cases by the use

of pure milk or by sterilizing it, by the maintenance of proper ventilation, and by removing the child from the exposure and great heat. But in a certain proportion of cases even these protective influences seem to fail, and where the infection is severe the symptoms come on with such appalling severity and rapidity that they necessarily create great alarm. Under these circumstances the chief danger which threatens the patient is collapse, and the treatment is, therefore, directed towards its prevention, towards support of the system, and for the purpose of removing the cause of the attack. Symes thinks that the general management should consist in rest, washing the mouth with glycerine or borax or diluted peroxide of hydrogen in the strength of two per cent., removing irritating particles of decomposing food from the bowels by a dose of castor oil, amounting to a drachm for a child of a year, or half a drachm for a younger child. He suggests the following prescription in attacks which are somewhat subacute or chronic and where there is no great need of hurry in unloading the bowels:

℞.	Olei ricini,	♏v.
	Mucilaginis acaciæ,	♏xv.
	Aquæ menthæ piperitæ,	ʒj.

This is to be given every hour until the bowels are moved. He also directs that one of the most important factors in the case is to change the milk at once, except in the case of infants who are at the breast, who should be allowed no other food or drink save the breast milk. In other infants only milk diluted one-half should be given, this dilution being made of pure water or by the use of barley water. In children who are old enough to take soda water, the bubbles of gas will prevent the formation of tough curds. Peptonized milk may be employed, or even condensed milk may be used. In some cases, particularly where there is reason to suspect the milk supply, sterilized milk should be employed or milk that has been Pasteurizated, but it must be remembered that Pasteurization does not render inoccuous milk which is derived from tuberculous animals. Careful attention should also be paid to the feeding-bottle, which should have no tube, the nipple and the glass being kept scrupulously clean. All starchy foods should be eliminated from the diet, and it may be well in some cases to give small doses of calomel. In other instances after the bowels have been thoroughly moved the salicylate of bismuth may be used. Sometimes minute doses of Dover's powder may be added to it.

We have already called attention in previous years to the great usefulness of intestinal irrigation in many of these cases. The irrigation may extend high up into the bowel and be performed with the aid of a soft-rubber catheter and a tube running from the ordinary fountain syringe. The fluid used had better be normal salt solution. Washing out the stomach has been recommended by some physicians, but as a matter of fact lavage in children is exceedingly difficult to perform.

The question as to how much we shall administer sedatives is a grave one. Personally, we have rarely, if ever, seen a case in which it seemed to us that nervous sedatives were indicated. Symes, however, suggests the use of the following perscription for a child of three months:

℞.	Tincturæ opii camphoratæ,	♏j.
	Glycerini acidi carbolici,	♏ij.
	Olei ricini,	♏v.
	Mucilaginis acaciæ,	♏xv.
	Aquæ menthæ piperitæ,	q. s. ad ℥j.

This is to be given every few hours.

As restoratives for threatened collapse we should give the child abundance of pure fresh air, brandy or strong coffee if needed, and sometimes from one-fourth to one-half grain of camphor suspended in mucilage with glycerine and used as a general diffusible stimulant. Should evidences of great exhaustion and feebleness be apparent as the result of profuse purging, which has resulted in depriving the tissues of fluid, hypodermoclysis with normal saline solution is to be performed.—*Therapeutic Gazette.*

To Facilitate Intubation of the Larynx.—Dr. C. Sihler, in *The Cleveland Medical Gazette*, says: "For a long time it was a mystery to me why there was such a difference in the difficulty of inserting the tube in different patients, and I attributed it to the difference in the configuration of the structures. Finally, however, it became clear to me that the important thing would be to have the head held well forward—in fact so much forward that one will perform the operation on one's knee. There is the greatest difference in facility of execution between performing the operation in a standing position and where one is resting on the knee—at least in my own experience. Very skilful men, perhaps, have no trouble in performing this operation. I have to confess that I do not look upon it as such an easy one, and as there may be others in the same predicament I give to these the brotherly advice: *Operate while on your knee.* One can readily understand why the conditions are so much more favorable. The vertebral column rather forms a concavity anteriorly when the head is held forward and almost downward, so that the larynx is brought thus backward and comes within more easy reach; and I think the direction in which we can now push the instrument will be easier to find than when standing."—*Am. Medico-Surgical Bulletin.*

Lancing the Gums.—This little operation, when really called for, often gives great relief, both to the local discomfort, and also to the general ailment from which the infant suffers; but it is often done when there is no occasion for it, and when, consequently, it causes needless pain and does no good.

There are four different conditions in which it may be right to have the child's gums lanced:

1. When a tooth is very near the surface, and by cutting through the thin gum the child may be spared some needless suffering.

2. When the gums are very red, hot and swollen; only in this case the gum is scratched or cut to bleed it, not with the idea of letting out the imprisoned tooth.

3. When the child has for some week or two been feverish and suffering; while, though the gum is tense and swollen, the tooth does not seem to advance.

4. As an experiment when, during the progress of teething, a child is suddenly seized with convulsions for which there is no obvious cause. The irritation of the teeth may have to do with this occurrence; and the chance of relieving it by so simple a means is not to be thrown away.

If the process of teething is going on quite naturally, no interference, medical or other, is either necessary or proper. (Charles West, "The Mother's Manual of Children's Diseases.")—*Practitioner.*

The Treatment of Constipation.—The *Clinica moderna* for April 27, gives the following formula:

℞.	Aloes,	gr. xxx.	
	Resin of jalap,		
	Resin of scammony,		
	Turpet root,	āā gr. xv.	
	Extract of belladonna,		
	Extract of hyoscyamus,	āā gr. 2½.	
	Medicinal soap,	q. s.	M.

Divide into fifty pills. One or two to be taken at bedtime for a fortnight or a month. At the same time the large intestine is to be treated with massage, and Carlsbad water is to be taken.—*New York Medical Journal.*

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Color-Perception.

There has never been a satisfactory explanation of color-perception. The most popular theories have been the products of metaphysical and psychological ingenuity, with only a shadow of physical or chemical basis. Optics is a science. Rays of light entering the eye can be mathematically measured and their paths definitely traced until they reach the retina when the exact methods of science are supplanted by mental speculation. Even such accomplished physicists as Young and Helmholtz were content to assume that bodies microscopically equivalent (nerve-fibers or cones) were physically different, making this difference only for the sake of their hypothesis. Different wave-lengths of light can be perceived and measured by an instrument of precision—the microscope. We can never satisfactorily associate quantities of definite existence with those only hypothetical. Helmholtz was accustomed to speak of the retina optically, as though it were a mathematical plane, although we know it possesses considerable thickness. Even if we were disposed to grant him the existence of the plane he never once attempts to define its location in the retinal structures.

In 1867, W. Zenker offered a very plausible theory that the outer bodies of the cones were built up of different-sized plates in order to respond to different-colored rays. While Zenker's theory was an innovation, it was not followed up by any definite experiments or measurements. Eleven years later, Stanley Hall received Zenker's hypothesis, and assumed that the discs were arranged in spectral order, those sensitive to red near

the point, those sensitive to violet near the base of the cone—each disc being transparent to all waves of greater length than those to which it is best fitted to respond. Hall evidently associated the small discs with the red rays because of their lesser refractive index.

In a very logical and scientific article in the *New York Medical Journal*, May 21, 1898, F. J. B. Cordeiro, a surgeon in the United States Navy, discusses Zenker's and Hall's surmises and shows the admissability of this theory on a mathematical basis. As the macula lutea contains no rods and visual purple—only cones—and yet can perform all the requisite visual functions, he holds that the cones alone need be considered in explaining color-perception. The outer bodies of the cones in the macula are .040 to .060 mm. long, and accepting Zenker's hypothesis this must be the difference of level between the planes of the extreme colors, red and violet. In accordance with Fraunhofer's experiments, he assumes that the dispersive powers of water and the ocular media are the same, and proves by definite measurements of his own as well as those of Helmholtz and Fraunhofer that the distance between the violet and red planes corresponds to the length of an outer body of a macular cone.

Up to this point we have a very acceptable description of the first process of color-perception. Beyond this is largely speculation; but it is so inviting in Cordeiro's hands that we briefly mention the rest of the article. A remarkable fact is that M. Schultze found the thickness of the plates to correspond about to the different wave-lengths. The larger plates, for instance, have a thickness of .0006 mm., while the wave-length of orange is .000607 mm. Cordeiro argues that it is thus possible that that particular plate will be set into vibration, the length of which equals the wave-length of the light. He further discusses the function of the remaining parts of the retina. He considers the inner part of the cone as a final refractor and regulator; and the pigment-laden processes which extend from the epithelial layer in the presence of light, he believes are concerned in a process of damping, by which each vibrating plate is prevented from being in contact with its neighbors. He believes that as the rods are not absolutely necessary to visual perception, and that while each cone has in all probability its own nerve fiber, the same is not true of the rods, else the number of fibers in the optic nerve would far exceed the actuality, it is likely the rods are undeveloped and functionless cones.

The perception of white and mixed colors is ingeniously explained by the laws of vibration, but this would take us beyond the ready comprehension of our general readers. Dr. Cordeiro has certainly made an acceptable contribution to the literature of color-perception, and has given Zenker's hypothesis a strong physical basis by direct measurements.

Tuberculosis in Paris.

M. Laudrin, of the Paris Municipal Council, has recently observed that tuberculosis holds its own in Paris for want of prophylaxis in the habits and conditions of the people. He points out that the city council is ready to vigorously combat tuberculosis not only by hospital measures, but by looking after the poor in their homes with a view to systematically controlling all tuberculous cases and thus limiting infection. In this report M. Laudrin closes by urging that tuberculosis, which is the most deadly of all the zymotic diseases, be included among the diseases whose medical declaration is obligatory according to the law of 1892. It will probably be only a few years until all our cities will give tuberculosis the attention it needs, as New York is now doing with marked results, viz., educating the masses as to the infectiousness of the disease and the importance of the proper disposal of sputum, and placing these cases where they can be properly cared for, and thus removing the source of infection. This is a humane undertaking inspired purely by the results of scientific medicine and second only in importance to vaccination.

BOOK-REVIEWS.

The Diseases of the Stomach. By William W. VanValzah, A.M., M.D., Professor of General Medicine and Diseases of the Digestive System in the New York Polyclinic, Medical School and Hospital; and J. Douglas Nisbet, A.B., M.D., Adjunct Professor of General Medicine and Diseases of the Digestive System in the same institution. Philadelphia, W. B. Saunders. 1898.

This is the third original comprehensive treatise on diseases of the stomach published in the United States within a little more than a year. If the same rate of productiveness shall be maintained, American authors in this field will soon rival in numbers the Germans, hitherto the most prolific. Of the two other authors who have produced works on this subject within such a short time, one, Einhorn, is himself of German birth, and the others, Hemmeter, of German parentage, both being imbued with the spirit of research and painstaking thoroughness of that extraordinary nation and of course unusually familiar with its literature. VanValzah and Nisbet are Americans, who, though they have evidently profited by a study of the best work of the continental schools both French and German, have drawn their inspiration mainly from an exceptionally large clinical experience. Following within a few months the appearance of such a complete and admirable work as that of Hemmeter, this new publication naturally challenges a critical examination as to its *raison d'etre* and its claims to the favorable consideration of the medical profession. Let it be said therefore, at once that the book is a valuable addition to the existing treatises on the stomach. The authors omit the usual chapters on the anatomy and physiology

of the stomach, properly enough, since these subjects are fully discussed in the elementary text-books. There can be no objection either to their having filled with more important practical matters the space accorded by some authors to a history of the development of gastrology as a special branch of medical science.

A large number of references and citations from other authorities would have rendered the book more interesting to many readers; yet in this busy, matter-of-fact age condensation is one of the highest virtues, and our authors have certainly managed to crowd into their 674 closely printed pages a large amount of instructive and practical matter, clearly, concisely and forcibly stated.

The work is divided into six sections, the first being devoted to a brief introduction and explanation of the rather peculiar classification. Section II. describes in five chapters "Diagnosis and Diagnostic Methods." These include very full and elaborate suggestions concerning the obtaining and recording of the clinical history (which is a most important feature of the examination, too often neglected), and intelligible descriptions of all the more practicable and useful methods, physical, chemical and microscopical, of reaching a diagnosis. In this chapter there are fewer cuts than we are accustomed to see of complicated apparatus devised and exploited for the benefit sometimes of the inventor more than that of the patient, but most of the really useful instruments are pictured and described with all-sufficient fulness. Section III., after a short consideration of "Digestive Hygiene" in general proceeds to the most valuable chapter in the book, that of diet. Based on an unusually ample experience in treating gastric disease through many years by dietetic means largely, the authors' discussion of this subject is peculiarly instructive. It is significant of the progressive tendency and scientific spirit of the senior author, that having, in the early years of his practice, confined his patients to a very restricted diet of which lean meat and hot water formed the chief part, and written a small volume at that time in advocacy of such a method of feeding, he now teaches a broad and catholic dietetic creed and gives more definite and precise directions for the adaptation of the various foods to the multifarious conditions of the digestive organs than any other writer with whom we are acquainted. Especially useful are the hints as to the information obtainable from a study of the urine and fæces in arranging or modifying the diet. In chapter III. of this section "Physical Remedies" are discussed in a general way. Water as a beverage, lavage, electricity, massage, and abdominal supports are considered in the light of the most modern researches. Exception, however, must be taken to the statement that "intragastric electricity is rarely practicable" on account of its inconvenience to the patient. Properly managed and with a suitable electrode it is less annoying to the patient, though less curative in most cases, than washing out of the stomach. The chapters devoted to the general consideration of drug-treatment leave little to be desired. In considering the diseases of the stomach the authors group together under the title "Dynamic Affections" those disorders which present no characteristic pathological anatomy, including those usually classed as neuroses, together with motor insufficiency, while the others, such as the various forms of gastritis, ulcer, cancer, etc., are grouped under the head of "The Anatomical Diseases of the Stomach." Gastrectasis or dilatation of the stomach is not given any place in this classification, not being recognized as a distinct pathological entity, for the reason that the condition is a consequence of either obstruction or myasthenia gastrica, and is therefore fully treated of under those heads. Strictly speaking this is doubtless correct and yet by the same logic dilatation of the heart would have to disappear from our nomenclature. Dilatation of either viscus can result from at least two widely different causes—from obstruction of an outlet or from myasthenia—and yet once established regardless of its cause, it becomes a most important morbid

condition which may well claim separate consideration. The diseases included in both the foregoing classes—dynamic and anatomical—are discussed with thoroughness and the most approved recent methods of treatment are as a rule fully and clearly described.

The final section entitled "The Vicious Circles of the Stomach" contains a rapid survey of the influence of the stomach on the other organs as well as of the secondary diseases of the stomach resulting from morbid conditions in other parts of the body. This portion of the work is more comprehensive than is usual in such treatises and yet is provokingly brief, the subject being so large and important and the space left for it necessarily so small.

To sum up, this book is distinctly creditable to its authors and to American medicine. It is one which every stomach specialist ought to have in his library, and general practitioners, even those familiar with the German and French languages, will find no work on the subject better adapted to their needs.

Accident and Injury: Their Relations to Diseases of the Nervous System. By Pearce Bailey, A.M., M.D., of New York City. New York: D. Appleton & Co. 1898.

The "traumatic neuroses" have been so prominently discussed in recent years, that it seems strange that until the appearance of this volume we have had no book exclusively on the subject. Much has been written, but many of the important contributions are foreign monographs inaccessible to most readers. Dr. Bailey has endeavored to present a volume embodying the different views, and deductions from them, in addition giving such facts of personal experience that may prove of service not only to general practitioners, but also to persons whose interest arises from legal rather than medical reasons. We have always viewed with suspicion a book having such a double function and have contended that medical books by medical men should be written exclusively for medical men; but a review of Dr. Bailey's work fails to reveal any unethical motive, and his whole treatise is scientific and scholarly. He opens with an introductory chapter upon the consideration of the case, collection of collateral data, history, physical examination, and examination for actual injury. Part I. relates to organic effects of injury to the nervous system. Part II. includes functional effects of injury such as the traumatic neuroses. Part III. is devoted to malingering, and Part IV. to treatment. The book is well printed, suitably illustrated, and presents a handsome appearance.

A Compendium of Insanity. By John B. Chapin, M.D., LL.D., Philadelphia. W. B. Saunders. 1898.

As its name implies this book is not an exhaustive treatise, but a small octavo compendium of 227 pages. Most of the volume is the result of Dr. Chapin's extensive experience among the insane, particularly at one of the largest insane hospitals in America, the Pennsylvania Hospital for the Insane. Although his views are often at variance with other prominent authorities, yet his years of observation lend weight to everything he says. The style is simple and concise, and the text is well illustrated. The book includes chapters upon Idiocy and Imbecility, Insanity and the Definition of the Terms, Insanity, the Actions of the Insane, the Classification and Nomenclature, and a chapter upon three of the forms of Melancholia. This is followed with one upon the Treatment and Management of Melancholia. Chapter IX. deals with the various forms of Mania and its variations. Then follow chapters upon the treatment of Mania, Dementia, Paresis, Epilepsy, and Abnormal Psychical States. The two final chapters of the book are devoted to Morbid Anatomy, Medical Certificates and Feigned Insanity.

EGBERT'S HYGIENE AND SANITATION: A Manual of Hygiene and Sanitation. By Seneca Egbert, A.M., M.D., Professor of Hygiene in the Medico-Chirurgical College of Philadelphia. In one handsome 12mo volume of 360 pages with 63 engravings. Cloth, $2.25 net. Lea Brothers & Co., publishers, Philadelphia and New York.

For a number of years past there has been need for a student's manual, giving a plain statement of the fundamental principles and facts of Hygiene and Sanitation, together with a detailed explanation of the methods of practical pursuance, based on American practice.

America is the leader in sanitary science—from household hygiene to national quarantine. Nearly every reputable American medical school includes this subject in their curriculum. As a rule students have had to depend on notes of their didactic lectures or turn to desultory manuals or obstruse and antiquated encyclopedias. To correct this unsatisfactory method of study, Dr. Egbert has designed his manual, and from our inspection of it, we unhesitatingly say that he has done his work well. We predict immediate success for the book.

MEDICAL NEWS AND MISCELLANY.

A Case of Infibulation.—Henriksen in the *Vratch* reports the following curious case: A physician made, by order of a jealous husband, an incision in the edges of each labium majus of a woman, through which he passed two small gold rings. When the wounds healed and the rings were firmly encased, the husband joined the two rings with a golden padlock, of which he alone carried the key.

The Compression Treatment of Pulmonary Tuberculosis.—The recent address of Dr. Murphy before the Section in Surgery of the American Medical Association was a most notable contribution to the subject of pulmonary surgery. The address was read only in abstract, and it is to but one feature of it that we are now going to call attention, namely, the part relating to the treatment of tuberculous disease of the lung by compression of the organ. As we understand the matter, Dr. Murphy proceeds upon the assumption that a tuberculous lesion of the lung, like one of a joint, for example, may ordinarily be healed quite readily by securing immobility, functional rest, of the affected part. In pursuance of this idea he immobilizes the lung by compressing it, crowding it back upon its hilum, establishing a sort of artificial atelectasis. This he accomplishes by injecting a quantity of nitrogen into the pleural sac. Nitrogen, he finds, neither exerts any untoward effect upon the pleura nor is absorbed to any appreciable extent; it simply keeps the pleura distended and the pulmonary tissue compressed. It is said that during the continuance of this compression the patient feels remarkably free from the symptoms that had previously preyed upon him.

The gas is allowed to remain in the pleura for a period of several weeks, and then it is withdrawn. In a goodly number of instances the symptoms do not return, and the inference is drawn that the disease has been overcome. The lung again becomes aërated and expands almost if not quite to its normal size. If, on the removal of the nitrogen, the morbid symptoms return, more of the gas is thrown into the pleura and kept imprisoned there for another term of weeks. It is said that this second injection is by no means always found necessary, and that when it is called for it almost invariably suffices for the cure of the disease in that lung. Then the other lung is treated in the same way.

We have here given only a general outline of Dr. Murphy's plan of treatment. For the details, upon which much undoubtedly depends, the profession will have to wait until the address is published. One may picture to himself a number of difficulties in the way of success with this method of treatment, but not one of them seems to be insurmountable. The first that occurs to us is the task of passing the eye of a hypodermic needle through the parietal pleura without at the same time passing it through the visceral layer, provided there is no pleural effusion. It is pointed out, however, that the outer layer of the pleura is held firmly attached to the wall of the chest, while the pulmonary layer is free to yield before the pressure of a blunt-pointed needle, and so escape puncture. Still, we may suppose that adhesions in the immediate neighborhood of the puncture might seriously impair this evasive yielding of the pulmonary pleura. Nevertheless, whatever difficulties might be encountered in the attempt to make the eye of the needle pass the parietal pleura and stop short of the visceral in the ordinary way of inserting the instrument, they might all be overcome readily, we presume, by cutting down methodically and picking up the outer layer of the serous membrane with a forceps.

Another difficulty that has been suggested lies in the frequent presence of extensive pleuritic adhesions, so extensive as practically to abolish the potential cavity of the pleura. But this state of things, we understand, Dr. Murphy meets by breaking up the adhesions, a procedure which is no doubt thoroughly practicable in a great many instances. We have heard this further objection mentioned, that the preponderance of tuberculous lesions in the apex would render the majority of cases refractory. This, we presume, rests on the assumption that the compression exerted by the nitrogen would be subject to the limitations of that exercised by pleural effusion—an assumption that seems to us not wholly warranted. At all events, when so careful a man as Dr. Murphy has been experimenting with the treatment for three years, as we understand he has, and when he reports a number of cases of cure, all such theoretical objections as those we have mentioned must be held in abeyance until the distinguished author's full data have been laid before us and until the plan has had ample trial in his hands and in those of others. The present time seems to be an era of glorious possibilities in the treatment of tuberculous disease, and more

than one of them, we think, will be realized. The chances are, it seems to us, that Dr. Murphy's ingenious plan will turn out to be one of those from which decided advantage may be derived.—*New York Medical Journal.*

Schenck's Sex Researches.—Professor Schenck's pamphlet on the predetermination of sex has appeared, and its contents will somewhat disappoint those who have been anticipating sensational revelations. His essay entitled "Einfluss auf das Geschlechtsver-hältniss" is just such a production as might be expected from a man of Schenck's scientific standing. It is a careful statement of the whole question up to date, and enumerates the conclusions to which its author has been led by his researches.

The first part of the work consists in a commentary upon previous researches, going to prove that the sex of offspring is dependent upon the state of parental nutrition, and particularly that of the mother during pregnancy. In the development of the embryo the generative organs are at first indifferent or hermaphrodite. In the further process one set predominates. This must be due to a predetermination which pertains to all the cells of the body. This predetermination may precede fertilization, a fact which is confirmed by observations on bees. Particular notice is taken of crossed sexual heredity by which each sex tends to propagate the other. The experiments of Robin and Thury tend to prove that a nutritional factor in the parent impresses a sexual destiny upon the cells of the embryo.

In the second part of his essay the fact is enunciated that the better the female is nourished the more females she produces, the number of males remaining constant. Thus the crossed inheritance tendency whereby males are naturally expected is modified by nutrition. This state of the organism's repletion is shown by the urine. For the perfect ripening of the ovum, the oxidation of the excreta must be shown to be complete. If there is a sugar residuum or equivalent in the excreted carbohydrates, a deficient oxidation factor exists whereby the properties of the fœtal protoplasm cannot be developed, and hence in accordance with the theory of crossed inheritance. "When no sugar is secreted, not even the smallest quantity, then the ovum will be developed, which is qualified to become a male individual." This is the cardinal point of Schenck's doctrine, and leads to the conclusion that appropriate nourishment before and after impregnation will lead to the conception of male children alone.

If therefore a male child be desired, the maternal urine must be found without the sugar, which is normally recognizable by the phenyl-hydrazin test. Schenck quotes numerous examples of the bearing of female children in cases of glycosuria. The desired modification by diet is usually accomplished by the administration of proteid and fat.

There is something between the sublime and ridiculous in the outcome of these researches of Schenck's. The results of his investigations have been awaited with agitated expectation in the scientific world, and now to

find that the whole question is one of sugar is in the nature of a sweet surprise. That the production of females is due to overmuch sweetness is a conclusion that may be more pleasing to the gallant than the scientist; while the misogynist will concede that the oppressions of the sugar trust are insignificant compared with these saccharine aberrations of Nature. If Schenck's conclusions are true, physiological glycosuria is an important condition to achieve for those nations whose populations are declining from lack of preponderance in the female elements.

The conclusion to which Schenck's researches lead is that while the births of males can in certain cases be predetermined, the voluntary production of girls is still a problem in which the embryologist will find opportunity for future labor and speculation.—*Medical Age.*

Ovariectomy in a Child Four Months Old.—Power opened the abdomen of a baby who had developed a large swelling during the course of the previous three weeks. A large unilocular ovarian cyst containing 59 fluid-ounces of fluid was found and excised through a three-inch incision just above the umbilicus. Recovery followed.—*British Medical Journal.*

Massage as an Occupation for the Blind.—Bennett advocates this for the large number of blind in this country, which he estimates at 56,000 persons, the majority of whom are dependent on private benevolence or public funds. He addressed inquiries to every superintendent of a State school for the blind throughout the country and from their responses believes that the percentage of their pupils who become self-supporting after graduating are: Illinois, 6 per cent. of the males and 1.5 per cent. of the females; North Carolina, 80 per cent. of the male whites; Texas, 75 per cent. of the males; Wisconsin, 20 per cent. of the males and 5 per cent. of the females. He considers the mechanical trades barred to the women while in case of the men there exists a prejudice against employing the blind. The women's chances in the matrimonial market he considers nil. He says the blind can make massage their own particular occupation, and they possess some qualifications that eminently fit them to excel in this; among these qualifications delicacy of touch and the blindness itself.—*Philadelphia Medical Journal.*

Note on the Relation of Iodine in the Urine to the Diazo-Reaction.—A writer in the INTERNATIONAL MEDICAL MAGAZINE for May, 1898, states (page 310) that "it is clearly evident that the ingestion of potassium iodide, or in fact any form of iodine, if continued for any length of time . . . can give rise in the urine to a reaction closely simulating the diazo-reaction of Ehrlich, and impossible to differentiate from a genuine diazo." This conclusion is based upon the findings in a case of continued fever of some four weeks' standing, supposed not to be typhoid fever on account of repeated negative response to the serum test, in which two grams of potassium iodide had been administered daily for ten days.

It seems hazardous to make a generalization like this from a single case, especially as that case was suspicious of being typhoid fever, and the reaction of the urine probably a genuine diazo-reaction for that reason.

In order to test the point I tried the diazo-reaction in specimens of urine from seven cases of hemiplegia, chronic rheumatism, etc., in which potassium iodide had been administered for 53, 43, 41, 26, 11, 6 and 4 days respectively, the amount taken at the time of the tests being respectively 15, 18, 18, 15, 9, 6 and 4 grams daily. All the specimens gave marked reactions of iodine, but in none was the diazo-reaction present. Nor did artificial solutions containing iodine or potassium iodide yield the reaction.

It appears, therefore, that the administration of iodides, or the presence of iodine in the urine, does not produce a pseudo diazo-reaction.

J. B. NICHOLS.

WASHINGTON, D. C.

A French Nurse Honored.—All Americans who have been privileged to visit Charcot's clinic at the Salpêtriére will remember his favorite head-nurse, Mlle. Marguerite Bottard; and they will not be surprised to learn that she has been decorated with the Cross of the Legion of Honor. It seems that this noble lady has been upward of fifty-six years in continuous service at the institution mentioned. It was in January in 1841 that Mlle. Bottard, who was then just nineteen years of age, commenced life there as a ward-nurse, and ever since, almost without a break, her time has been devoted to the care of the sick. An insatiable worker, she seldom quitted the premises, and it is reported that during a period of three years she never once crossed the threshold of the hospital. At first for some fifteen or sixteen years Mlle. Bottard carried on her duties under the successive direction of the elder Trélat, De Falret and Legrand du Saulle. Then she was promoted to superintendent of the section for nervous affections under Charcot, with whom she remained until the end. He had the highest possible opinion of his faithful assistant, and often said that she richly deserved this very distinction which now has been awarded to her.—*Medical News.*

Admiral Dewey as a Patient.—The following note from the *Lancet* for May 28th, will doubtless be of interest to our readers at the present time: A correspondent of the *Birmingham Daily Post* calls attention to the fact that Admiral Dewey, of the United States Navy, whose recent naval exploit at Manila, involving the destruction of the Spanish fleet at that station, is in every one's recollection, was a patient in 1883 in the Royal Naval Hospital at Malta when Inspector-General of Hospitals Sir J. N. Dick, R.N. (late director-general of the Naval Medical Department), was at the head of that institution. Admiral Dewey (who was then in command of the United States corvette *Juniata*) was suffering from

abscess of the liver, from which he made a successful recovery after surgical operation. The correspondent alludes to the pluck and fortitude exhibited by the patient during his severe illness on that occasion.—*New York Medical Journal.*

A Medical Centenarian.—The last survivor of the War of Independence in Greece, Dr. Mavrogenis, has celebrated his hundredth birthday. Born in Paris in 1798, he abandoned his studies in 1821, leaving the Italian university at which he was in attendance, and entered the army in Greece and distinguished himself in many battles. The number of wounds which he received seemed to have no effect on his general health, for at his remarkable age the doctor is still well preserved.

Non-medicinal Methods of Treatment.—In his opening address before the last Congress for Internal Medicine, Professor von Leyden gave expression to the following sensible views: "To-day we are conscious at the bedside that we have not simply to treat the disease, but chief of all the patient himself, and that he is indifferent to nothing, not even the slightest thing; nothing is adjusted at the bedside in the right way of itself; the physician has to see to everything, and not infrequently the so-called simple remedies are the ones which possess the power to hold together the delicate thread of life and again to fortify it. Medicine of to-day no longer rests upon a fixed system and no longer draws from a single source. Its remedies and methods have been multiplied and extended to an astonishing degree. What formerly appeared of secondary importance has now risen to a position of prominence. Numerous therapeutic measures arise to demand recognition. Our therapy is no longer exclusively based upon medicaments and prescriptions. We know that the task of the physician is not finished when he has written his prescription *lege artis.* He must make a more critical and thorough investigation of his patient's condition. We are convinced that many patients recover without medicine, and that many diseases are healed by other means."—*Medical Record.*

Madame Henriette Rubbers *née* Bay died recently at Constantinople. Madame Rubbers, who had reached a very advanced age, for many years taught midwifery in the Imperial School of Medicine, Constantinople, and was midwife-in-ordinary to the Sultan's harem.

Dr. John Blair Gibbs, the first medical victim of the present conflict with Spain, was a practising physician in New York up to the beginning of the war. He was the son of an officer in the United States army, who was killed in the Custer massacre by the Indians. He was born at an army post in the West in 1858. He was a graduate in arts of Rutgers College in 1878, and in medicine of the College of Physicians and Surgeons, New York, in 1882. He served in the surgical interne staff at Bellevue and afterward at Roosevelt Hospital. After studying abroad for

a while, he returned to New York and entered upon practice. He was an attending surgeon to the Demilt Dispensary and assistant attending surgeon to the Lebanon Hospital. When war was declared, Dr. Gibbs volunteered at once for service in the navy, and after passing his examination and receiving his commission, was the first of the New York volunteer naval surgeons to be assigned to duty. He was ordered at first to the *Miantonomah*, but was later transferred to the *Panther*. When the marines from the latter were landed on the shores of Guantanamo Bay he was sent with them. He was killed by a stray bullet, just after leaving the hospital tent, at one o'clock on the morning of June 12th, during an attack on the camp by a Spanish guerrilla troop.—*Medical Record.*

Physical Requirements of Recruits.—A list has been issued by the War Department regarding the physical proportions for height, weight and chest measurements. For the infantry and artillery the height must not be less than 5 feet 4 inches, and weight not less than 120 pounds, nor more than 190 pounds. For the cavalry the height must be not less than 5 feet 4 inches, nor more than 5 feet 10 inches, weight not over 165 pounds. No minimum weight is given for the cavalry, but the chest must be satisfactory.

Footwear for Soldiers.—Wellington was ever deeply anxious that his men should be well shod. "What is the most essential thing for a soldier?" asked a member of the government of the Duke of Wellington. "A good pair of boots to begin with," replied the hero of Waterloo; "and in the next place a second pair of boots; and thirdly, a spare pair of soles." Alexander's victorious army reached India on sandals, and to this day a similar flimsy foot-protector is generally worn in eastern countries, but the ideal boot for a modern soldier should be impervious to moisture, stout and yet pliable, accurately shaped, and constructed of the most durable material. It should also be easily put on and taken off, should prevent the entrance of dust, sand or mud, and above all, favor the free play of each pedal articulation, while at the same time affording support to the muscles of the foot and ankle collectively. An ill-fitting, clumsily-shaped boot is worse than none at all. Undue pressure or friction at any point quickly leads to corns and lameness. Formerly bunions and ingrowing toenails, due to pointed boots and shoes, were causes of a halting gait amongst the population generally, but of late years more attention has been given to the anatomic features of the foot, especially in growing children. Deformed feet are, however, still of frequent occurrence in the ranks, each case demanding special treatment; but it should be an invariable axiom with officers commanding companies that boots should be made to fit the feet and not *vice versa*. The following recipe for making boots both soft and waterproof was recommended by Edmund Parkes, and it still holds first place: "Take half a pound of shoemaker's dubbing, half a pint of

linseed oil, half a pint of solution of India-rubber; melt together with care and rub in firmly." The india-rubber solution is highly inflammable, requiring attention during the melting process. The *Daily Mail* says, "It is always the same story, knavery and slackness clogging and strangling the best efforts of the British soldier. To save somebody a few pence on a boot you stand to lose a good rifle and bayonet in a decisive battle, and to break a good man's heart into the bargain. Is it worth it? But it is always happening; the history of the army is a string of such disgraces; and each time we arise and bawl 'Somebody ought to be hanged.' So says everybody. And nobody ever is hanged."—*Journal of the American Medical Association.*

Early American Doctors.—It may be well here to refer to the method of obtaining a medical profession in those days. There were but two schools of medicine in the country: The one at Harvard College just established, and that at New Haven, organized in 1784. But by reasons of the dangers and expense of traveling they were by no means well attended.

In general the medical education was such as the student could pick up by serving as an apprentice to some noted practitioner, which combined the duties of a student with many menial affairs. He ground the powders, mixed the pills, rode with the doctor on his rounds, held the basin when the patient was bled, helped to adjust the plasters, sew wounds and run with the vials of medicine from one end of the town to the other. It was a white day when such a young man enjoyed the rare good fortune of dissecting a half-putrid arm. So great, indeed, was the difficulty of obtaining anatomical subjects, that the medical school at Harvard College made a single body do duty for a whole year.

Under such circumstances the doctor's knowledge was practical and derived from personal experiences rather than from books. The advantages of study were sparingly enjoyed. Few physicians boasted of a library of fifty volumes.

His apprenticeship ended, the student returned to his native town to assume the practice of medicine. At that period, with the exception of the minister and the judge, the doctor was the most important personage in the community. His genial face, his engaging manners, the sincerity with which he inquired after the carpenter's daughter, and the interest he took in the family of the poorest laborer, made him the favorite for miles around. He knew the names and personal history of the occupants of every house he passed. The farmers' lads pulled off their hats to him, and the girls dropped courtesies as he passed. Sunshine and rain, daylight and darkness were alike to him. He would ride ten miles in the darkest nights over the worst of roads in a pelting storm to administer a dose of calomel to an old woman or attend a child in a fit.

The drugs were stowed away on the shelves of the village store, among heaps of shoes, Rohan hats, packages of seeds and flitches of bacon.

The physician was compelled to compound his own drugs, make his own tinctures and put up his own prescriptions. His saddle bag was the only drug store within forty miles. Each spring the blood must be purified, the kidneys excited and the damsel who fainted profusely bled. Large doses of senna and manna, and rhubarb and molasses were taken daily. It is safe to say that more medicine was taken every year by the well than is now taken by the sick in the same time.

Water was denied the patient tormented with fever. In its stead was given a small quantity of clam juice. Mercury was taken until the lips turned blue and the gums fell away from the teeth.

The writer has a vivid recollection, when about eight years old, in a raging fever, pleading for water; the nurse handed the pitcher and the child satisfied her burning thirst. Her brother, overhearing what was going on, rushed into the room, exclaiming: "You will kill her," but it was too late.—*American Monthly Magazine.*

Place aux Dames!—The best way for the women to prove their intellectual equality is to prove their superiority! This they are fast proceeding to do. There have been recently two striking illustrations: Madame Klumpke-Dejerine occupies the central position of a picture of the prominent doctresses of the world, which the *Leipzig Illustrated* presents to its readers at the beginning of April. Madame Dejerine was formerly a Miss Klumpke, of San Francisco, and went to Paris some fifteen years ago with her two sisters, all of them to work out careers for themselves. The three sisters have been eminently successful. One has had her pictures accepted at the Salon; another is the mathematician at the Paris Astronomical Observatory, and Madame Klumpke-Dejerine herself is well known for her work in nervous diseases. The symptom-complex caused by affections of the nerves that pass out of the cord between the eight cervical and first dorsal vertebræ, especially with involvement of the sympathetic in this region, and the resultant ocular and facial symptoms, is known as the Klumpke paralysis, as it was her study of it that first showed its individuality. Since her marriage with Professor Dejerine, they have worked together on the volume on the Anatomy of the Central Nervous System, which appeared some time ago under their joint names. Since Miss Klumpke's time the position of *chef de clinique* at the Paris hospitals is open to women, she having won for them that privilege by distancing her male competitors in the examination for it after her graduation.

The second instance is the fact that a doctor's degree has just been conferred on a woman, Fräulein Hildegarde Ziegler, by the University of Halle-Wittenberg, at Halle. It is a doctor's degree in philosophy, conferred after an examination passed *magna cum laude*, and her promotion was the occasion for quite a demonstration of friendly feeling. The last doctor's degree conferred by the University of Halle on a woman was almost a century and a half ago, in 1754, and that was a degree in medi-

cine. The title of the doctor's dissertation for graduation was as follows: "Of the too rapid and very pleasant, but often uncertain cure of disease," which shows that our lady colleague of the last century was not too credulous, but was a thoughtful practical person, who looked beyond the immediate present.—*Philadelphia Medical Journal.*

A Bust of Sainte Beuve, the famous French critic, will shortly be placed in the Luxembourg Gardens in Paris. The erection of this memorial to the author of the *Causeries du Lundi*, is due to the initiative of Dr. Cabanès, editor of *La Chronique Médicale*. Sainte Beuve in early life studied medicine; he was a dresser under Dupuytren, a clinical clerk under Richerand, and a deputy *interne* in the St. Louis Hospital. The hero of Sainte Beuve's first work, *Joseph Delorme*, was a medical student, whose passions (as Macaulay said of those who fell under the spell of Byron) had consumed themselves to dust, and on whom the sweetness of the heart had ceased to fall like dew. The hero, whom Sainte Beuve had pictured himself, was unkindly described by Guizot as *un Werther carabin* (*carabin* = sawbones). Sainte Beuve retained throughout life his interest in medicine, and a large proportion of the subscribers to his memorial are members of the medical profession.—*British Medical Journal.*

British Army Doctors.—According to the London *Spectator*, in the Commons on Friday, March 25, Mr. Powell Williams made a very satisfactory statement as to the army doctors. In future there is to be a special and separate army medical corps—like the corps of engineers or the army service corps—within which the doctors are to have real and not sham military rank. That is, they are to be colonels, majors and captains after the manner of the army service officers. This reform ought to have been made years ago, but it is to be hoped that it is not too late, and that a really good stamp of men will henceforth be attracted into the corps, which ought to become one of the most respected, as well as one of the most important in the army. Having won so great a victory the doctors wanted more, and asked for the restoration of the medical officers to the regiments. Mr. Brodrick was sympathetic, but declared that in order to carry out the proposal they would have to add sixty officers to the medical department. If the army doctors would spend their first five years of service with a regiment they would get into touch with regimental life, and learn far more of the ordinary army conditions than they will under the new plan.

A Delicate Operation.—Dr. Pills—"Yes, old Milyuns was on the verge of nervous prostration, all through worrying about his money."

Dr. Squills—"How did you cure him?"

Dr. Pills—"I removed the cause of the trouble."—*Life.*

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ORIGINAL COMMUNICATIONS.

SOME ORDINARY CASES OF POISONING. WHO IS RESPONSIBLE?[1]

BY A. L. BENEDICT, M.D.,

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With a Legal Consideration by Hon. Arthur W. Hickman, of Buffalo, N. Y.

Case I. Annie D., servant, single, aged twenty-two. Not menstruating at the proper time—and perhaps fearing pregnancy—she bought 2 cc. of oil of tansy at a drug store and took it at one dose. Two or three hours afterward epileptiform convulsions began, and several which I witnessed presented quite characteristic features of clonic spasms, with rolling eyes, suffused face and, apparently, unconsciousness. After an injection of apomorphine the patient vomited freely, the stomach-contents containing a very appreciable quantity of oil of tansy in drops, while the whole room reeked with the odor. The patient was partly forced, partly persuaded to drink large amounts of warm water and the repeated vomiting seemed to clear the stomach entirely of its contents. After about an hour the patient had become quite rational and was out of danger.

Case II. Mrs. C. D., becoming despondent, took about 15 cc. of laudanum at four o'clock, with suicidal intent. Her husband had died suddenly from heart disease—demonstrated ante-mortem—a short time previously, but, as she was already engaged to be married again, the explanation of her mental state is left to those better able to judge the workings of a woman's mind. I was called at six, and found the patient in a deep stupor. After inducing emesis with apomorphine, 200 cc. of a strong decoction of coffee were given. Heaters were freely used and the

[1] Read at the Quarterly Meeting of the Buffalo Academy of Medicine, Sept. 14, 1897.

patient was aroused at frequent intervals by shaking and other gentle but irritating measures. I cannot too strongly condemn forced walking and similar exhausting means of excitation. Manual respiration was not required. After two or three hours the patient had sufficiently recovered to be left in charge of an attendant, who was directed to keep constant watch and to have the patient pass water two or three times during the night.

Case III. Belle ——, the mistress of a married man, attempted suicide by swallowing a mixture containing about ten centigrams of cocaine. I was summoned on account of symptoms of faintness and, as an hour had already elapsed, no time was lost in making a systematic examination. The stomach tube was introduced, but became immediately clogged with food. However, its passage and removal caused vomiting, which was repeated by stimulating the fauces. Strong coffee was administered and external heat applied and the patient made a good recovery.

Case IV. Mrs. E., having suffered for some time from pains, apparently of a rheumatic or neuralgic character, was advised by a friend to buy ten cents' worth of colchicum, shake it in a pint bottleful of whisky and use the mixture internally. Apparently, no explicit directions were given as to dose, nor did the druggist give her any information on this point. In the course of three days the patient took about half of the total quantity, which was probably as strong as, or stronger, than the officinal wine. On the second day some diarrhea was noticed, which increased on the third day, but the patient would not consent to have a physician summoned. In the afternoon, after several passages described as containing mucus and blood, the patient fainted. Owing to delays in sending a messenger and the distance, it was two hours before I reached the patient's home. Meantime, a passing physician had been called in and I found him making attempts at resuscitating what more careful examination showed to be a dead body. This statement is not made in the sense of a criticism and, if so taken, it applies to myself as well, both in regard to this case and several others. The doctor fully realized that his efforts were probably too late; he also realized what some men forget, that it is better to waste such endeavors on a corpse than to waste time in determining beyond question, whether life is or is not extinct.

Case V. A Scotchman, aged fifty-eight, took 30 cc. of laudanum, at 7 P. M. Late in the evening, a physician was summoned, who administered aromatic spirits of ammonia and used faradic electricity. I saw the patient at 1:30 A. M., when there was profound coma and the respirations were reduced to eight per minute. Artificial respiration by arm movements was used and heaters were applied. At 2:15, 6 cc. of fifty per cent. alcohol were injected. I am now inclined to believe that alcohol is never a genuine stimulant and, therefore, not indicated in such cases, though probably the majority of the profession are still in favor of administering alcohol as a stimulant. Breathing soon became spontaneous. At 3 A. M., 500 cc. of urine were removed by catheter. At 4.35, the pulse was 80 per minute

and strong; respiration was fair, the exact number per minute I have forgotten. The patient was put on a stretcher, preparatory to taking him to bed. The bearers started, but I stopped them to make sure that the patient was comfortable. To my surprise, he had stopped breathing and he could not be resuscitated. There was slight emesis which may have caused asphyxia but the autopsy did not confirm this point. However, a dissection of the neck was not permitted and there may have been food in the larynx or upper part of the trachea, without showing in the lungs. The autopsy, fifteen hours after death, resulted as follows: "Rigor mortis moderate, stomach and intestines greatly distended with gas, gall-bladder filled with bile but free from calculi. Spleen small, capsule thickened, Hypertrophy of the muscular coat of the bladder. There was, of course. venous congestion of various organs but no discoverable serious lesion."

The reason for committing suicide was said to be inability to get work. I am at a loss to account for the sudden death, after nearly three hours of spontaneous respiration and after the apparent danger had passed.

Case VI. A man aged thirty-three, took four grams of rough-on-rats at 7 A. M., which he vomited. At 8:30, he took a handful of dry white arsenic. At 9, I administered 2 centigrams of apomorphine, hypodermatically. Freshly prepared ferric hydrate was then given and, afterward, acacia water and flax-seed tea as demulcents. As the patient grew weaker, hypodermatics of alcohol and water and an enema of whisky were given. Death occurred with general tremor and seminal emission at 2 P. M. As a matter of interest, it may be stated that living spermatozoa were found in the semen.

Autopsy, two hours post-mortem, revealed the usual red appearance of acute gastritis, with entire erosion of the mucosa at the pyloric end. The small intestine was congested, though not so red as the stomach and contained a large amount of mucus, corresponding to a milder degree of catarrhal inflammation. Both kidneys were somewhat enlarged and the left contained a cyst, of the size of a cherry, apparently formed in the capsule. The patient had given a history of epilepsy following an attack of scarlet fever in childhood. There was found a four-pointed, osseous growth from the vault of the skull, near the superior longitudinal sinus, depressing the dura. This exostosis was of the form of a maltese cross, each arm being about 1 centimeter in length.

Case VII. A young married woman, took, during the night, five morphine pills corresponding to about four centigrams of morphine, for the relief of toothache. At 2 P. M., she had a fainting spell and I was summoned. Nitro-glycerine was administered hypodermatically and, later, atropine by the mouth and ammonia by inhalation. Strong hot coffee was then given. The period of danger had, of course, practically elapsed before I was called. At night, a dose of bromide was given to relieve the nervous after-effects of the various medications. A dyspepsia followed, lasting for a few days.

Case VIII. was that of a lad of eighteen who had been treated by another physician eight days previously for melancholia. The patient, at that time, had complained of insomnia, bad dreams, nocturnal emissions, and confessed to having masturbated till a month before. He persisted in treatment only two days. I saw him at 10:15 in a state of collapse. It was stated that he had taken rough-on-rats. A centigram of apomorphine was given hypodermically, and emesis followed in a minute and a half. Dilute alcohol was also administered hypodermically. At 1 o'clock he complained of excruciating pains in the bowels and of great thirst; the skin was cyanotic. At 1:45 he died, apparently from respiratory failure. Autopsy, five hours post-mortem, showed that the mucous coat of the stomach was softened and almost entirely separated, the organ containing 200 cc. of bloody fluid with shreds of mucous membrane. In some spots the erosions extended almost through the muscular coat. The intestine was inflated with gas, its mucous membrane reddened, and, in some places, eroded. The thoracic viscera were normal. The brain was not examined.

Case IX. was that of a boy of ten for whom a physician had prescribed calomel tablets, for some slight hepatic or bowel trouble. One-grain bichloride tablets were dispensed, of which two or three were taken before the mistake was discovered. Some symptoms of gastric irritation were observed and a domestic emetic was administered. As a precautionary measure, I was called to wash out the stomach. Using a No. 11 tube with abrupt end, this procedure was unusually successful. Whites of eggs were also introduced through the tube during the lavage.

Case X. was one of arsenic poisoning, of which no details could be learned, except that the motive was distinctly suicidal. The patient was a middle-aged man who looked like the caricatures of western congressmen. His life was saved by misrepresenting the intention of treatment, which consisted mainly in the introduction of ferric hydrate. Argument and prevarication would have been utterly useless, as the patient was bent on suicide, and he was of too powerful build to succumb to force. A straightforward lie was the only course open and he took the antidote on my informing him that his death was certain and that the medicine was given only to save him the agony of the local effect of arsenic. By the way, it may be remarked that cases of painless death from arsenic poisoning are not particularly rare.

These cases are reported, not on account of their intrinsic interest, nor because the best and most recent treatment is exemplified, but to call attention to the ease with which deadly drugs are obtainable, in spite of legislation intended to check the sale of poisons. The poisons used and the reasons for taking them, may be summed up as follows:

I. Tansy, to cause menstruation, probably as an abortifacient.

II. and V. Laudanum, suicide.

VI., VIII. and X. Arsenic, suicide.

III. Cocaine, suicide.

IV. Colchicum, relief of pain.

VII. Morphine, relief of pain.

IX. Mercuric chloride, blunder in dispensing.

Thus, in all but Nos. IV., IX., VII, the intent was distinctly criminal. In every case except No. IX., in which a mistake was made by the pharmacist, the poison was obtained at a drug store, without a prescription and under circumstances, including the appearance of the patient, which would have suggested to any careful and conscientious observer, either the probability of suicidal intent or that the patient should be warned of the dose and dangerous character of the drug.

Case IV. was a peculiarly distressing one. A young woman, happily married and with a little child, was removed from her family while in almost perfect health, for the pains from which she suffered did not seem to have been different from those to which most persons are liable from taking cold. Had it not been for the wishes of her family, I should certainly have made an attempt to bring within the pale of the law the meddlesome woman who posed as an amateur prescriber and the druggist who sold several hundred doses of a dangerous medicine, and one which has practically no domestic nor external use, without either label or verbal warning of its nature.

In Case VI., it will be remembered, the patient made an unsuccessful attempt at suicide with rough-on-rats and succeeded after taking white arsenic. The druggist can scarcely be blamed for selling the former, as it is in such common domestic use, and as it is obtainable even at groceries. But, it may well be asked, if arsenic is easily obtainable in one form, why not in any other? The only effectual way to put such poisons out of reach of would-be suicides, is to stop their sale altogether. The use of poisons for vermin is objectionable, partly because most of them are unmerciful means of taking life and also because of the danger of accidental death of children, domestic pets and even adults. Insects can be killed by powders that do not seriously injure mammals, while traps, or good dogs or cats, are the most effectual means of disposing of rats and mice.

Regarding the three cases of morphine poisoning, H. C. Wood refers to several cases in which from one to three centigrams of morphine have caused death, yet the patients had no difficulty in securing solutions and pills representing, respectively, forty, twenty and four centigrams of morphine. The laudanum, bought with suicidal intent, was properly labeled. The patient, who bought morphine pills to relieve pain, had no warning, verbal or written, of the need of any caution.

Of the six persons attempting suicide, one was learned, weeks after his death, to have been a murderer. One was distinctly insane. One was epileptic. The other three acted merely on an impulse. None of them would probably have dreamed of ending life by violent means, and would probably have desisted if they had been met, at one or two drug stores, with a refusal of the desired poison. Without wishing to criticise careful

and conscientious pharmacists, it is evident that these ten cases, representing four deaths, four serious and two moderate risks of life, could all have been prevented if the various druggists concerned had been either careful or inclined to give a different answer to the question, "Am I my brother's keeper?"

I will leave to one better able to discuss legal questions than any of our members, the consideration of the present law and of much-needed amendments, but I wish to express the conviction that no legislation can be effective which does not require a physician's prescription, of current date, for the dispensing of any powerful medicine.

LEGAL CONSIDERATION.

The State is very jealous of the lives of its citizens, and to that end has enacted laws which shall protect them from the time of their conception, onward. These laws are grouped together in the Penal Code under the heads of murder, suicide, miscarriages, poisoning, etc., and are very explicit and very far reaching in their terms. The punishment in all cases is severe.

None of the cases mentioned constitute murder or homicide. Case II., case III., case V., case VI., case VIII. and case X. were cases of suicide or attempt at suicide. Case II., case III. and case X., each cases of attempt at suicide, recovered. Cases V., VI. and VIII., died. They were suicides.

"Although suicide is deemed a grave public wrong, yet from the impossibility of reaching the successful perpetrator, no forfeiture is imposed."

And it is not made a crime by the Penal Code, so that the last-named cases, by the success of their efforts, committed no crime, while in the former cases, where the patients recovered, they were each guilty of the crime of attempting suicide, which is defined by the Penal Code as follows:

"A person who, with intent to take his own life, commits upon himself any act dangerous to human life, or which, if committed upon or towards another person and followed by death as a consequence, would render the perpetrator chargeable with homicide, is guilty of attempting suicide." "And he is guilty of a felony and is punishable by imprisonment in the State's Prison not exceeding two years, or by a fine not exceeding one thousand dollars, or both." There have been arrests and convictions under this act.

By section 176 of the Penal Code, a person who willfully in any manner, advises, encourages, abets or assists another person in taking the latter's life, is guilty of a felony. Under this section a person who advises another to go and commit suicide, upon the other doing as advised, has been arrested. This section is hardly broad enough, however, to reach case IV., where a meddlesome woman advised the buying of ten cents' worth of colchicum, with whisky, as a remedy for pains of which she knew nothing, because it could not be said that she willfully assisted, although it is true that she ignorantly assisted in taking a life.

The woman who took the tansy, probably for the purpose of producing an abortion, would have been guilty of manslaughter in the second degree, under section 194 of the Penal Code, and the person who sold it to her would have been guilty of manslaughter in the first degree.

If the drugs used by the suicides, and those attempting suicide, and by the person who died from accident were not labeled properly, the person who sold them would be guilty of a misdemeanor under section 401 of the Penal Code.

Under the pharmaceutical act relating to Erie County, section 16, provision is made for labeling each package containing laudanum, arsenic, colchicum, morphine, mercuric chloride as poisons, and provides for their registration.

The cunning that persons who are on the verge of suicide, of women who are anxious to free themselves from prospective burdens exercise in obtaining the drugs to carry out their purpose, is hard to meet. In cases of insanity the cunning is sufficient in itself to procure the needed drug, and a refusal at one place does not check the determination to get possession of the killing drug. Parties will in almost every case elude the most careful watchers.

In cases of abortion and miscarriage there are usually other parties interested, who are willing and anxious to aid the distressed woman to get rid of her encumbrance. All of these things, of course, are criminal and the law deals severely with all such attempts when discovered. The fact that the attempts succeed and the medicines are procured, cannot be charged to the improper act of the pharmacists, though it must be admitted that there are pharmacists who, for the hope of gain, will sell any medicine or drug that may be called for.

The law means to reach every wrongdoer, but it fails in numerous instances. Probably it fails more often than it succeeds. The law prohibits any person from aiding any abortion, but it is known that many physicians do aid in producing abortion, and yet the great honorable majority of the physicians who would refuse to participate in any such act, ought not be charged with criminality. So we think that, while there are pharmacists who are willing to aid in these prohibited matters, and to sell drugs and poisons that they are permitted to sell only under certain restrictions, without any regard to these restrictions, the great body of honorable pharmacists ought not to be charged with criminality or offense.

The probability is that in each case mentioned the pharmacists labeled the goods sold as poisons, and was assured that it was to be used for some perfectly legitimate purpose. Laudanum, arsenic, morphine and tansy each have uses that are common and, like oxalic acid, corrosive sublimate, carbolic acid, Paris green and cyanide of potassium, are used by housekeepers almost as household articles.

There is a law against carrying concealed weapons. Perhaps there might be a law against having poisons in one's possession, but it would be

only now and then that the law would be enforced, as it is in regard to concealed weapons, and it would, therefore, be adding to that large number of statutes which already encumber our books which are not enforced and which, from their very nature cannot be enforced.

One remedy for such cases as those set forth by Dr. Benedict is for a thorough investigation in each case and a prompt and earnest prosecution of every person violating any of the laws which I have mentioned above.

Another and probably the absolute remedy for such cases would be the passage of a law prohibiting the sale of poisons, especially active poisons, by pharmacists, unless on prescription, and of course making suitable provision for the sale of poisons used commercially. This remedy would be radical, but it would be legal and in full accord with the care which the State has exercised for the preservation of the life of its citizens, and in the same line with the action regulating the practice of medicine, the practice of pharmacy and the practice of other professions.

At first such a proposed law would be considered as an invasion of the right of the individual, but I think it would soon be recognized as a necessity to the State and a protection to the individual and I think would meet the approval of all intelligent citizens.

ADDRESS.

BENEFICENT MEDICINE.

BY MINOR MORRIS, M.D.,

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NOTHING better expresses the nature and mission of medicine than the term beneficent. We may speak upon scientific medicine, or the empiric, humoral or chemic medicine in times past, yet in whatever time or place, the relation of the art to man has been quite the same—a beneficent agency for the relief of pain, the limitation of disease and lengthening of life.

It is often urged that medicine is not an exact science; but to this it can be said that the inestimable gifts of philosophy, literature, art and music have not come to us through exact science and that whatever conduces to human welfare is not to be measured in exact scientific terms. Medicine has had for its intimate associates religion and philosophy on the one hand and science on the other, yet it has ministered to human needs that none of these could satisfy. There is the science of medicine and

there is also the art of medicine, and, like the arts, medicine is to be measured by its results and not alone by its amount of exact science.

We think of ancient medicine as a mass of rubbish; a mixture of empiricism, superstition and a small amount of clinical truth. Yet the greatest minds of antiquity were profoundly impressed with the value of medicine and its beneficent results must have convinced the analytical minds of Aristotle, Pythagoras, Cicero and Hippocrates. Their surgery, hydrotherapy, massage and useful drugs bear witness to the keen observation of the Greek physicians, and our most recent surgical measures for the correction of spinal curvature are but a revival of the methods described and practised by Hippocrates 400 years before our era. It was this great master who expressed the dignity and beneficences attaching to medicine in the age of Pericles when he said, "The highest gift the gods have conferred upon men is the power to heal their fellow-creatures."

Modern medicine is the child of the Renaissance. The new life which came into art, literature and science found expression in medicine through the genius of Harvey, who brought it to a mechanical and physiological basis, divesting it of religious mysticism and philosophical speculation. From Harvey to Jenner, from Jenner to Pasteur and Koch and Behring is an unbroken chain in the evolution of modern medicine, and, while the accumulation of scientific truth in this period is incomparably great, the direct beneficent results to human welfare and happiness are immeasurably greater. Medicine has gained dominion over all the epidemic destroyers of life; surgery has been shorn of its suffering, the mental and nervous outcasts have been delivered from the dominion of Satan and man's life brightened and bettered, his calamities marvelously ameliorated.

In old Gloucester Cathedral, I was deeply impressed by two things: first the tomb of Robert, Duke of Normandy, son of the Conqueror, famous as a crusader and heir to the throne of England; the other a statue erected appropriately at the entrance to that noble edifice to the memory of perhaps mankind's greatest benefactor—the immortal Jenner. The glory of chivalry and genius and of medicine are here contrasted—the one futile and destructive in religious zeal, the other beneficent to all mankind in ages to come by discovering exemption from disease and suffering. How seldom do we realize in our daily life a great silent force guarding our homes, our schools, our food and drink, the air we breathe, our commerce, guarding every economic relation of the body politic against disease. But let a cholera ship enter New York harbor and the nation be appalled by the prospect of an epidemic; then is the beneficence and greatness of this force recognized in its power to dispel the spectre of death.

But there are other results than the prevention and cure of disease. The great body of scientific physicians is a conservative factor in society. These men are not extremists; they are rather optimistic in a calling which deals with human weakness, sin and suffering. They have learned by contact with all phases of life, the capacity and various needs of humanity, that

the moral, social and economic ills are chronic and cured only by the slow operation of natural law. It is the beneficent aim of medicine to reduce these ills to a pathological basis and find the cure which executions and servitude have failed to work.

The deductions of psychic medicine and criminology may be the most beneficent force ever brought to bear upon society for the preservation of its best elements.

Finally, medicine is giving us light upon the most subtle problem of life—the nature of mental processes. Into this *ultima thule* of human speculation medicine is placing metes and bounds, and the great question upon which all philosophy hinges, whether knowledge is external or internal, subjective or objective, may yet find its solution in psychological medicine.

Medicine is therefore intimately associated with the intellectual life of man, and no one has appreciated this so well as the great critic Hammerton, who says: "The profession of medicine is the one best suited to the development of the intellectual life; being constantly engaged in following and observing the operation of natural laws it prepares the mind for bold and original speculation. A medical education is the best possible preparation for philosophical pursuits. An immense advantage, even from the intellectual point of view, in the pursuit of medicine and surgery, is that they supply a discipline in mental heroism."

To those who are about to enter the practice of medicine there is but one prospect if they would attain the best our calling can give—the prospect of arduous and unremitting toil. Medicine does not give up her great secrets willingly, but, like the gods, has all good things to sell for labor. The past-masters of our craft have gone to bed rock for the foundation of their success; therefore, be not too impatient for success.

Medicine has a twofold mission in life; first, it is the means by which we shall gain an honorable livelihood, therefore let us be learnéd and skillful in our art. Secondly, and more than all, it is the means by which we shall solve the problem of life by attaining that development of the soul intended by its creator. This is the crowning beneficence of medicine—that it leads us into the learning and human culture of all time, it opens to our understanding the best and grandest the human mind has wrought. Balzac spoke the truth when he said: "All we are is in the soul—let us see that ours have their full development."

SELECTED DIGEST.

THE PHARMACOLOGICAL ACTION OF THE THYROID GLAND.[1]

BY ROBERT HUTCHISON, M.D., M.R.C.P.,

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THE recent promotion of the thyroid to an official position in the *British Pharmacopœia* makes this a suitable time to state what is known as to its pharmacological action. More especially is this the case owing to the fact that the literature relating to the thyroid has recently swelled to such enormous proportions that he who runs is certainly no longer able to read it, whilst embedded in that literature there are yet a number of facts and observations which have a very direct bearing on the therapeutic use of the substance. It may, therefore, be permitted to one who, from the special nature of his own investigations, has been obliged to read all that has been written on the subject, to discuss briefly the present state of our knowledge as to the physiological effects of the administration of the thyroid, and the bearing of that knowledge upon its use as a medicinal agent.

I.—EFFECTS UPON METABOLISM.

Shortly after the thyroid began to be used in the treatment of myxœdema, it was noticed that the urine of patients who were taking it contained a large excess of urea. [1] [2] More exact investigations were soon set on foot [3] [17] which showed that not only was the elimination of nitrogen increased in patients who were taking thyroid, but that the amount eliminated very often exceeded considerably the amount ingested in the corresponding period of time. Obviously, therefore, a tissue rich in nitrogen, presumably muscle, had undergone an increased destruction. The loss of weight in such patients was, however, much greater than any mere destruction of proteid tissue would account for, and attention was next directed to the intake and output of respiratory gases. [18] [22] The results showed that under thyroid administration there is a great rise in the amount of oxygen taken in, and a very considerable, but relatively not so great, increase in the amount of CO_2 given out. The obvious inference was that the thyroid leads to a greatly increased consumption of the body fat.

Briefly, then, it may be said that the effect of the administration of the thyroid is to increase oxidation in the body; it makes the tissues, as it

[1] *British Medical Journal*, July 16, 1898.

were, more inflammable, so that they burn away more rapidly. The products of the disintegration of the nitrogenous tissues appear in the urine almost entirely in the form of urea, uric acid, [7] [12] [13] [22] and the xanthian bases [7] being neither regularly nor appreciably increased, while the products of the fat destruction are eliminated as carbonic acid by the lungs, and water by the kidneys. It is important to note the large increase in the excretion of water which occurs under thyroid administration. Diuresis is often one of the first effects of the drug, and a considerable proportion of the very sudden fall of weight which is often to be observed at the outset of a course of thyroid treatment is to be attributed simply to loss of water. Thyroid feeding seems to make the tissues drier. On cessation of the treatment this loss of water is very quickly replaced, and is accompanied by a corresponding increase in weight.

It is not sufficient merely to know that the thyroid increases tissue metabolism; we must inquire more minutely into the details of its action. Under normal conditions, as is well known, there is a constant destruction of proteids, carbohydrates, and fats going on in the body. If the amount of proteids in the food be increased, there may be a temporary storage of nitrogen in the body, but very soon equilibrium is again established, and the output becomes equal to the intake. If we increase the amount of carbohydrates and fat in the diet we may succeed in storing some of the excess as fat, but we find also that we have diminished the amount of proteid broken down in the body. In the words of the physiologists, carbohydrates and fats have a proteid-sparing action. Now it is important to inquire, What effect has the thyroid upon all this? Does it merely hurry on the whole process so that the turnover in the body is, as it were, increased without any disturbance in the relative destruction of proteid and fat occurring, or does it increase one of these more than the other? In other words, Does thyroid feeding lead to a quantitative or to a qualitative alteration in metabolism or to both?

Now this is no mere academic question suitable for discussion in the psychological lecture room; it has very direct practical bearings. The use of the thyroid as a remedy in obesity has recently attained a wide prevalence. The ideal "antifat" would be something which increased the power of the tissues to consume fat without at the same time causing an increased destruction of proteid. Does the thyroid do this? Obviously not, for as we have seen its use is followed by an increased elimination of nitrogen as well as of carbonic acid. Granted then that both fats and proteid tissues tend to be broken down, on which of these does the thyroid act most powerfully? Is there any direct action on the proteid tissues or are these only attacked when there is no longer enough fat left to exercise a protective influence on the proteids? Towards the settlement of this question much research has recently been directed, but as yet the results of it are rather contradictory. Some writers [15] assert that the thyroid has a specific action on the proteid tissues, and a few even go so far as to main-

tain that under thyroid administration the proteid-sparing power of fat and carbohydrates is suspended. Others believe that the proteids are only attacked secondarily and after fat has been to a large extent got rid of, and it has certainly been shown by careful observations on cases of obesity that great loss of weight can occur while there is yet less nitrogen being eliminated than is ingested. [9] [17] For my own part I think there is a good deal to be said for the view that the increased elimination of nitrogen which is observed at the commencement of thyroid feeding is due to destruction of circulating proteid, and that the fixed proteid tissues are only attacked when the store of fat has been considerably diminished. The practical inference is that in treating cases of obesity by thyroid feeding the diet should not be much restricted, and especially that nitrogenous matter should be abundantly represented in it. The safest method of procedure, of course, would be to estimate the amount of nitrogen in the diet, and the amount eliminated, and to stop the treatment or diminish the dose whenever the latter exceeded the former, but that method is too laborious to be practicable.

In its action on metabolism the thyroid is unique amongst medicinal agents. No other drug that we are acquainted with is capable of increasing the oxidation processes of the body in such a way. It may best be compared, perhaps, to the effect of muscular exercise. The thyroid increases metabolism without putting one to the necessity of performing muscular work. Hence its usefulness as an aid in combating an excessive accumulation of fat. It may also be compared to the effect of the toxic substances which produce fever. Fever, however, seems to have a more specific action on proteid metabolism than the thyroid has, but a fuller investigation of the chemical nature of the active constituent of the thyroid may be expected to throw some light on the toxalbumins which produce pyrexia. Indirectly, also, the effects of thyroid administration tend to confirm the view that the rise of temperature in fever is mainly due to a diminished heat loss, for by thyroid feeding one may increase tissue metabolism to an amount sufficient to produce a loss of weight of as much as eight pounds in a week, yet without causing the temperature to rise more than half a degree.

It is not yet determined whether the active constituent of the thyroid exerts its effects on the tissues directly or through the intervention of the nervous system. In favor of the belief that the latter method is the real *modus operandi* is the very minute quantity of the substance which is sufficient to produce powerful effects. If one regards the tissues as held in leash, as it were, by the trophic centers of the nervous system in much the same fashion as the heart is by the vagus, then it would not be difficult to understand how, if under the action of the thyroid this influence were temporarily suspended, the tissues would run off, so to speak, and a great increase in metabolism result. But this is pure speculation. I have tried to find whether the thyroid has any directly stimulating effect on the ac-

tivity of cells by causing yeast to produce fermentation in a sugar solution containing some thyroid extract, but did not find that the rate of fermentation was increased thereby. Of course an experiment like that is by no means conclusive, for it might very well be that the thyroid had no stimulating influence on vegetable cells.

Whether the thyroid influence be exerted on the tissues directly or only through the medium of the nervous system, its essential nature would seem to consist in a hastening on of the life-history of the cells. Cell division occurs more rapidly, and the cell reaches maturity and passes into old age in a shorter time than normal. The reverse of this process occurs typically in myxœdema, where many of the cells never seem to reach a mature stage. Thus the subcutaneous tissue becomes filled with cells in an embryonic stage, and when the old hairs fall out the cell division which should lead to the formation of new ones ceases to occur, and the patient becomes bald. The thyroid exerts its beneficial influence by hastening on the life-history of the cells. This explains, also, its action in backwardness of growth in children and the good effect which it sometimes exerts in such skin diseases as psoriasis and ichthyosis, where the final death and casting off of the epidermic cells seems to be much delayed.

It is interesting to reflect that the secretion of the thyroid is constantly finding its way into the circulation and must there exercise its effects on metabolism. One is tempted to speculate whether the different states of nutrition in different individuals may not be due to variations in the activity of their thyroids. In cases of simple goitre one is almost compelled to believe that there must be a great demand for the secretion, and that the hypertrophy of the thyroid is a response to the demand. This might explain the very remarkable effects of thyroid feeding in cases of simple goitre. In such cases, especially if recent and the subject young, administration of thyroid by the mouth is followed by a steady diminution in the size of the goitre, the latter tending to increase again when the treatment is stopped. The thyroid given by the mouth lessens the demand for the natural product, and the hypertrophy of the thyroid passes off. Bruns [9] has made observations in dogs with goitre which confirm this view. He examined a piece of the goitre microscopically and found that it presented the characters of a gland which was over-secreting. After thyroid treatment the goitre almost disappeared, and on examining a fresh portion he found that the gland had now resumed its normal characters. The advocates of the thyroid theory of exophthalmic goitre will no doubt find confirmation of their views in the observations of Matthes [17*], who has found that a study of the respiratory and urinary excretions in that disease show that metabolism is increased in the same way as in thyroid feeding.

The occurrence of glycosuria as a result of thyroid administration has frequently been observed, and recent experiments tend to show that the glycosuria may be of the alimentary type. Thus Bettmann, in the *Berliner klinische Wochenschrift*, No. 24, 1897, found that if, after a week

of thyroid feeding, one gives a patient 100 g. or so of glucose on an empty stomach glycosuria results. He was successful in obtaining it in about half of the cases in which the experiment was tried, although the same patient showed no glycosuria if a similar amount of glucose was given without a previous course of thyroid. Such experiments seem to indicate that the thyroid may sometimes affect carbohydrate metabolism in such a way as to diminish the power of the tissue to utilize sugar.

II.—Effects on the Circulation and Blood.

Increased rapidity of the heart's action is perhaps the most constant of the effects observed from thyroid administration. The action of the drug can hardly be said to be manifested, unless the pulse rise by 10 or more beats per minute. Along with increased activity one often observes other disturbances of the heart's action during thyroid administration, such, for example, as irregularity, palpitation, or even threatenings of failure. The experimental study of these effects has recently been attempted, but curiously enough, the results have been entirely negative. Vamossy and Vas [31] found that even strong solutions of iodothyrin had no effect at all upon the strength, rhythm, or rate of the isolated frog's heart, or on the heart of rabbits or dogs *in situ*, and I have myself obtained entirely negative results on intravenous injections of colloid matter.[32] Nevertheless, the clinical fact of increased rapidity of pulse during thyroid feeding remains, and a conceivable explanation of the negative results of experiment is that the heart is acted on secondarily by some substance produced during the exaggerated metabolism which follows thyroid administration.

This specific effect of the thyroid upon the heart renders caution necessary in administering the drug to patients with cardiac debility. In cases of obesity, where the fatty change may also have affected the heart, this is especially necessary. It has also been suggested that this action of the thyroid would be likely to render its administration useful in the cases of functional brachycardia.

It has been found that the active part of the thyroid has no effect on the blood pressure. This has been shown by Vamossy and Vas for iodothyrin, and by myself for the colloid matter. The fall of blood pressure which occurs when decoctions of the gland are injected is mainly due to the action of organic extractives, and a similar fall follows the injection of extractives from other glands or of a weak solution of Liebig's extract of meat. It has further been shown [45] that these bodies do not affect the blood pressure at all if they are administered by the mouth instead of by intravenous injection. Notwithstanding this experimental evidence the sphygmometer shows a slight fall of blood pressure in patients who are under the influence of the thyroid. The fall seems to be due to enfeeblement of the heart rather than to any peripheral dilatation of blood vessels.

The effects of thyroid administration upon the blood have been studied

both clinically and experimentally. Perry [33] found that the only change which resulted from the administration of medicinal doses in man was an increase in the relative number of the lymphocytes (that is, a physiological leucocytosis). MacPhail and Bruce [24] found in cases of insanity that a dose of twelve tabloids daily caused a fall in the red corpuscles of about $7\frac{1}{2}$ "per hæmic unit" and a diminution in the amount of hæmoglobin to the extent of 6 per cent. The administration of iron at the same time prevented the loss of hæmoglobin and brought about a slight increase in the number of the red cells. Bruns [35] has also seen chlorosis set in during the treatment of a case of acromegaly by means of thyroid.

On the other hand, Lebreton [36] has compared the blood in a case of myxœdema before and after thyroid feeding and has found all the constituents increased and a greater relative increase also in the lymphocytes. Donath [6] has found that in rabbits small doses improved the condition of the blood, while large doses caused the destruction of the red corpuscles to the extent of from 14 to 22 per cent. Van Vamossy and Vas [31] gave to a dog varying doses of iodothyrin by the mouth, subcutaneously and by injection into a vein. They found that no effect was produced unless large doses were injected into the vein. In that case they observed a transitory fall in the specific gravity of the blood and in the red corpuscles and hæmoglobin, whilst there was a more distinct rise in the number of the leucocytes. It would seem, therefore, that small doses of thyroid produce no effect on the blood of healthy persons, while large doses cause an increased destruction of blood corpuscles just as of other cells. In myxœdema, on the other hand, the stimulus which thyroid feeding gives to all growth and division is manifested in the blood by a rise in the number of the corpuscles.

III.—Excretion of the Active Constituent of the Thyroid.

The active constituent of the thyroid appears to be excreted entirely by the kidney. I have found iodine present in the urine of a dog within three hours after the administration of 1 grain of the colloid matter. On the other hand, I have never been able to detect any iodine in the bile of animals to which thyroid preparations have been given, even in large doses. Baumann has also detected iodine in the urine of dogs whose thyroids had been removed and to whom iodothyrin had been administered. [41] It is difficult, however, to detect iodine in the urine of patients who are taking thyroid preparations. Thus von Jaksch [39] failed to find that element in the urine of a patient after the administration of as many as fifty thyroid tabloids. This may be due to the well-known power that the normal thyroid possesses of laying hold of iodine when given either as an inorganic salt or in the form in which it occurs in thyroid preparations and of storing it up and thus preventing its excretion. If a healthy thyroid be present, therefore, iodine does not appear in the urine unless a large excess has been administered. This explains how Blum [42] has been able to detect iodine in

the urine of normal dogs to whom 100 sheeps' thyroids had been given at once.

On the other hand, the absence of the thyroid in myxœdema prevents the storage of iodine in the body, and accordingly it is more easy to detect that substance in the urine of cases of myxœdema which are under thyroid treatment. Whether the iodine is excreted in an organic or inorganic form must at present be left undecided. For my own part I have found that it can only be detected after incineration of the urine, and that it is present in a form soluble in hot or cold alcohol. Blum, [42] however, states that he has found it present in an inorganic form. The question is of importance as throwing light on whether the organic iodine compound in the thyroid is entirely broken down in the body or whether some of it is excreted unchanged.

The excretion of the active constituent of the thyroid appears to be a gradual one. At all events there is no doubt that the action of the drug continues, often for several days, after the administration of it has ceased. That this is not to be attributed to the thyroid of the patient laying hold of the substance, and gradually giving it out is to be inferred from the fact that the after-action is as noticeable in cases of myxœdema, in which presumably the thyroid is totally inactive, as in normal subjects.

IV.—Dosage of Thyroid Preparations.

It must be admitted that we have as yet no satisfactory method of standardizing thyroid preparations. One cannot do so by making a given quantity of any thyroid preparation equivalent to a given weight of fresh gland because the amount of the active constituent present in any given weight of fresh gland may vary very greatly. Nor can we take the colloid matter as the standard, for, as I have shown elsewhere, there is reason to believe that it also may be of varying composition. It has been suggested that the activity of thyroid preparations should be gauged by the amount of iodine they contain, but this also may prove fallacious, for there is not yet any certain proof that the presence of iodine is essential to the activity of the thyroid at all.

Practically the difficulty is got over if the preparation be made from a sufficiently large mass of glands. The individual inequalities in these are then able to neutralize one another. Thus one finds that the composition of the colloid matter as found in the market is almost constant, and the thyroid powder of the new *Pharmacopœia* will no doubt be so too, if prepared in fairly large quantities at a time.

I have prepared some of the new liquor thyroidei according to the directions given in the *Pharmacopœia*, and find that it contains about 4½ per cent. of colloid matter. An ordinary dose of the latter is about 0.1 grain, and that would be contained in about 37 minims of the liquor. I am therefore of opinion that the dose of the latter recommended in the *Pharmacopœia* (5 to 15 minims) is too small, and would better have been

given as 15 to 60 minims. Otherwise the liquor seems to be as good a fluid preparation of the thyroid as could have been devised.

Whatever the preparation employed experience seems to show that it is best to give it in small doses and frequently, rather than in large quantities at longer intervals. It is also very necessary to feel one's way in the administration of the thyroid, beginning with a small dose, and gradually increasing it. This is necessitated by the fact that idiosyncrasy plays a large part in the reaction which patients show to the drug, and the extent of the reaction in any particular case can never be foretold. The symptoms produced by over-action—headache and pains in the limbs, nausea, diarrhea, palpitation, etc., and which are classed under the term "thyroidism"—have been partly ascribed by Lanz [43] not to any specific action of the thyroid, but to the presence in the preparation employed of toxic substances produced by putrefaction. Cunningham [45] has also recently made out a pretty strong case for this view. On the other hand, it has been denied by Zum Busch [44] as the result of his experience in about a thousand cases that this explanation of thyroidism is the correct one. For my own part I think there is some truth in both positions. There is no doubt that the thyroid is a substance very prone to undergo putrefactive change, and some of the symptoms of thyroidism, notably the alimentary group—for example, nausea and diarrhea—are, I think, to be explained by the presence of toxic products in the preparation employed. Since I have used preparations made by myself, of whose freshness I could be certain, I have seen nothing of this group of symptoms in the cases I have treated. On the other hand, I believe that the headache, pains in the limbs, and cardiac symptoms are due to a specific action of the thyroid, or are produced by some product of the exaggerated metabolism which it excites and that no degree of purity in the preparation employed is a guarantee that such symptoms will not arise. Seeing, moreover, that the organic iodine compound in the thyroid will stand prolonged boiling without having its activity in the least impaired, it ought to be possible to prepare a powder for administration which shall be entirely free from any products of decomposition. Whether the method of preparation of the thyroid powder of the *Pharmacopœia* eliminates the possibility of any toxic products remaining in it is, I should think, decidedly open to question.

Postscript.—Since the above article was written there has appeared in the *British Medical Journal* (July 9, 1898) a paper by Dr. William MacLennan describing a new thyroid preparation ("thyroglandin"). As that paper contains a number of what (in my judgment) are serious errors as to the facts of the chemistry of the thyroid and the nature of its active constituent, I feel that I ought to make a short reference to it. Dr. MacLennan asserts that the thyroid contains two important principles—an iodoglobulin and iodothyrin—and that both of these are requisite to produce the specific effects of the gland itself. This assertion is quite unfounded in fact. As I have shown elsewhere, the fresh thyroid contains

only one iodine-containing compound—namely, the colloid matter. This consists of a proteid part (possibly a globulin) combined with an organic compound of iodine (crude iodothyrin), and the latter compound is split off on hydrolysis of the colloid. The specific effects of the thyroid can be produced by the administration either of the colloid matter as a whole or of the iodothyrin split off from it. The effects produced by both preparations are identical, provided an equivalent dose of each is employed. Further, the colloid matter contains all the activity of the thyroid, the extractives being incapable of producing any of the specific effects of the glands.

It is not the case that all of the processes which have been devised for separating the active constituent of the gland result either "in the destruction of the iodoglobulin entirely, or in the partial separation of the iodothyrin only." In the preparation of the colloid matter, as described by myself, the glands are extracted with dilute caustic soda without the aid of heat. The colloid matter is so soluble in alkalies that it goes entirely into the solution, and if any traces of iodothyrin happen to have been split off from it in the gland, these are also dissolved. The subsequent addition of acetic acid throws down the colloid, and it is afterwards dried without having undergone any decomposition whatever. Furthermore, this separation is accomplished without any other substance of "a useless or objectionable nature" being contained in the final product.

The process which Dr. MacLennan describes as that by which "thyroglandin" is prepared will be perceived at once by any one conversant with the chemistry of the thyroid to result in the extraction of the colloid matter, *plus* the salts, extractives, and any other substance which happens to be present, and which is soluble either in water or in boiling caustic soda solution. As the salts and extractives have been shown to be "useless," and as the other substances (for example, products of decomposition) may very easily be objectionable, I entirely fail to see the superiority of this process over those already in existence. That the product is simply an impure form of the colloid matter I entertain no doubt at all, and by the administration of $1\frac{1}{2}$ gr. of the latter thrice daily I have over and over again obtained quite as marked results as were produced by double that dose of thyroglandin. I therefore cannot regard the latter preparation as in any way superior to those with which the profession is already familiar.

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For the convenience of other workers I append a classified list of papers bearing upon the pharmacological action of the thyroid. The numbers correspond to references in the text.

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REVIEW OF MEDICINE.

MEDICINE.

A Clinical Synopsis of the Diagnosis and Treatment of Chronic Renal Diseases. (*Medical Record*, Vol. 53, No. 26, 1898.) By William McEnroe, M.D., New York.

This writer states that, in his opinion, this primary cause of every form of renal disorder is due to inability of the kidney to throw off excrementitious products which subsequently poison the system. He divides the different forms of kidney diseases into (*a*) parenchymatous nephritis; (*b*) amyloid or lardaceous degeneration; (*c*) interstitial nephritis or renal cirrhosis.

Parenchymatous Nephritis.—This variety comes on during acute fevers or may be caused by cold. The main symptoms are general anosarca, albumin and hyaline and granular casts in the urine, occasional symptoms of uremia, and frequently disturbed vision or total amaurosis. The disease may be prolonged for several years—the writer stating that he has seen recovery take place after the third year.

Amyloid or Lardaceous Degeneration.—This form comes on slowly and is always found in persons who are debilitated from wasting diseases.

At first there is a polyuria, but as the condition advances the total quantity of urine may be diminished. Convulsions are rare.

Interstitial Nephritis.—The causes which produce this variety act slowly and insidiously, generally coming on in late life. The urine at first is copious, pale in color and contains a small quantity of albumin, hyaline and granular casts, the latter of which may be absent at times. Cardio-vascular changes are constantly present and frequently there is a tendency to wakefulness in early morning, loss of memory, or apoplexy.

Albuminuria.—The author thinks that the presence of albumin in the urine is a constant symptom of every form of kidney disease, although it may be present in the urine of healthy persons after a cold bath, mental distress or severe exercise.

Casts are due to the coagulation of the fibrinogen which is forced out of the glomeruli under the influence of some product caused by the disintegration of the leucocytes. The number of casts in a given case is proportionate to the amount of albumin in the urine. The presence of casts in the urine is not always significant of kidney trouble, for this may be caused by temporary changes in the glomeruli, owing to acute hyperexia or as the result of obstruction of the renal veins.

Retinitis Albuminurica.—This symptom complicates the parenchymatous and interstitial varieties and consists of numerous white spots situated near the optic disc and the macula lutea. They are generally round in shape, but sometimes seen in irregular patches which may subsequently coalesce. Hemorrhage into the retina is common.

Uremia.—The author states that experiments have shown that this condition may be due to many causes, among which may be mentioned the absorption of decomposed intestinal products, the accumulation of ammonium carbonate, the presence of potassium salts, products of degenerated tissue, and the absorption of various secretions, and that uremia is caused by the poisonous action of these materials on the nerve centers. Uremic may suddenly develop after a hot bath or be caused by sudden heart failure, the latter of which causes a lowering of the arterial pressure in the renal circulation and thus an impairment of the excretory functions. Uremic attacks are frequently mistaken for epilepsy and in order to differentiate the two diseases the patient should be catheterized.

Treatment.—In the treatment of these conditions hygienic measures should be strictly used. The patient should always wear flannel next to the skin. Disorders of digestion should be corrected with salol and bismuth, and a milk diet used. Diuretics are valuable and calomel is the best. Where there is an idiosyncrasy against digitalis, that drug should not be used. In some cases hydrogogue cathartics do more good than diuretics. Diaphoretics are especially serviceable if anasorca is present. Olive oil may be applied to external surface and patient subsequently enveloped in hot blankets or given hot bath (104–106 F.), leaving in both from half an hour to an hour. In cases of interstitial nephritis in which condition

there is a general arterio-sclerosis coexisting McEnroe highly commends the use of mercuric chloride in combination with tincture ferric chloride and believes he has seen cases in which the remedy effected a cure.

WOLDERT.

Dont's for the Treatment of Pneumonia. (*The Philadelphia Polyclinic*, May 7, 1898.) By Thomas J. Mays, M.D.

Don't believe that acute pneumonia is a self-limited disease and will get along as well without treatment as with it. Don't hug the delusion that fever in any degree is a benefit to the patient. Don't fancy that you can always tell croupous from catarrhal pneumonia. Don't allow pain in the abdomen to draw your attention away from the chest. Frequently the beginning of pneumonia is accompanied by severe pain in the right groin, which may lead one to suspect the onset of typhoid fever. Don't direct your treatment more towards the heart than towards the lungs. Don't fail to recognize the great influence of the brain and nervous system. Don't lose sight of the serious indication of rapid and laborious breathing. Don't be afraid of applying ice to the chest in rubber bags. It will do no harm. Don't fail to apply as many bags as are necessary to cover the area of inflammation. Don't think that you can get as good results from a bath-tub, or from cold general spongings, as you can from the local application of ice. Don't become alarmed when the ice produces a sudden drop in the temperature and think the patient is going into collapse. Don't fail to retain the ice so long as fever is present and resolution has not taken place. Don't omit to apply one or two ice bags to the head, Don't overlook the beneficial influence of strychnine in combating pneumonia. Administer $\frac{1}{20}$ of a grain by the mouth every three or four hours, and besides give the same dose hypodermically once or twice a day, until the system becomes irritable. Don't omit the hypodermic injection of $\frac{1}{4}$ of a grain of morphine once or twice a day to secure rest and sleep. Don't fail to administer oxygen by inhalation more or less constantly if the patient is cyanotic or short of breath. Don't fail to bleed if cyanosis and dyspnea are not relieved by oxygen inhalation. Don't lose sight of the great value of tincture of capsicum in relieving great nervous depression, delirium, dry black coated tongue, picking at the bedclothes, etc. Give it from a half to one tablespoonful doses in water every two or three hours, or oftener, in alcoholic pneumonia. Don't fail to give sodium salicylate, ammonium acetate, potassium acetate and potassium citrate, three grains of each, in a dessertspoonful of peppermint water, every three or four hours, if there is the least evidence of a rheumatic complication. Don't overlook the important action of quinine in this disease. Don't fail to support the patient with an abundance of nourishing food, such as milk, freshly expressed beef-juice, etc.

THERAPEUTICS.

Galvanic Treatment and Cure of a Case of Elephantiac Edema of the Legs. (*Archives D'Électricité Médicale Expérimentales et Clinique*, May, 1898.) Dr. E. Albert-Weil.

This article is illustrated by two photographs, one taken on March 25, 1897, which presented all the characteristics, while the one taken October 18, 1897, showed great improvement and appeared like the limbs of a very fat person. The patient was a woman who had been born in France and had lived there all her life; she was fifty-seven years of age and for the last seventeen years had made her home along the Seine. Her legs started to grow fat when she was about twenty, but only the last four years had they begun to become edematous. The largest diameter of the right leg was 57 cm., the left 55 cm. From May 25th until July 10th, galvanization was applied nineteen times, and during the interval her legs were bound tightly with a towel; at the end of this time they measured 40 and 45 cm. respectively. Albert-Weil reported detailed accounts of treatments and measurements until October 20th, and at that time the legs had been reduced to 38 and 40 cm. The patient could walk without difficulty and felt comfortable. The writer had analyzed 400 cases reported by Avanjo and Moncorvo, and failed to find any form of treatment that showed the same improvement that his case did under galvanism. Before trying it, however, he tried thyroid extract with the same support he had carried out under electricity; it was continued for six weeks with apparently no result.

NEWCOMET.

Some Remarks Upon a New Mydriatic (Mydrin). (*Lancet*, July 2, 1898.) By Sydney Stephenson, M.B., C.M., F.R.C.S.Edin.

The claims of ephedrine hydrochloride as an agent for dilating the pupil have been before the profession for several years, but apparently without attracting anything like general attention. The first communication upon the subject was made by a Japanese physician, Kinnosuke Miura, and this was soon followed by papers from the pens of J. Inouye and A. de Vriese. From these contributions, however, it was clear that the dilatation of the pupil induced by ephedrine was of moderate extent only, although it possessed the great practical advantage of passing off rather quickly (in from one to twenty hours). Later it was found that the action of ephedrine could be enhanced by the addition of a trace of homatropine hydrochlorate in the proportion of a hundredth part of the latter to one part of the former substance. This observation led E. Merck, the well-known Darmstadt pharmacist, to combine the two medicaments. The new agent, which is known as "mydrin," is a white powder, readily soluble in water. Its physiological action has been reported upon by Groenouw in Germany, by Suker in America, by Cattaneo in Italy, and by Mr. Simeon Snell in England. These various observers find that a 10 per

cent. aqueous solution when dropped into the eye has the power of dilating the pupil moderately within a few minutes, without affecting accommodation in the least. They also agree that the action of the pupil to light is to some extent retained while the eye is under the influence of the drug, the effects of which pass away within from four to six hours. In no instance have they seen any irritation or inflammation result from the application. Groenouw, who experimented on one hundred patients, found that the dilated pupil had an average diameter of 5.6 mm. Suker speaks of mydrin as "an ideal mydriatic for diagnosis purposes," and Mr. Snell's experience appears also to have been equally favorable. These claims seemed to me too strong to be set on one side without investigation. Accordingly for some time past Stephenson has used a 10 per cent. watery solution of mydrin for the purpose of dilating the pupil, when he wished to explore all parts of the fundus oculi with the ophthalmoscope or to examine the cornea carefully in order to ascertain the presence or absence of slight changes. Moreover, for the purposes of more exact study he has recently taken twenty patients and noted in each one (*a*) the near and distant sight, and (*b*) the diameter of the pupil. A single drop of mydrin solution (10 per cent.) was then placed in the conjunctival sac, after which the following points were observed: (*a*) the time at which the pupils became dilated; (*b*) the transverse diameter of the pupils; (*c*) the near and distant vision; and (*d*) the time at which mydriasis passed away. The results obtained in this way may be thus briefly related. The pupil became dilated in a period which varied, according to the individual, from 15 to 68 minutes, the average of the twenty observations being 29.35 minutes. The mydriasis was found to ensue more speedily if patients kept their eyelids closed after the application had been made. Owing to the fact that the iris did not completely lose its action to light, there was some little difficulty in measuring the size of the dilated pupil, the transverse diameter of which ranged from 5 to 7.5 mm., and averaged 6 mm. For a similar reason it was not altogether easy to say with precision when mydriasis has passed away. But in no instance did the maximum time (after full dilatation) exceed four hours, while the minimum stood at 75 minutes. The average worked out at 184.84 minutes—that is to say, a trifle more than three hours. In no case did sight, either for distant or near objects, show any alteration when the eye was fully under the influence of mydrin, a remark which applies also to the position of the punctum proximum. Lastly, it is practically important to note that the agent set up neither discomfort nor irritation. As the result of my observations Stephenson has reached the conclusion that mydrin is capable of doing all that writers have claimed for it—namely, that it causes a moderate dilatation of the pupil without involving the function of accommodation. It cannot but prove, therefore, a valuable agent in the hands, not only of the ophthalmic surgeon, but also of the physician, who must often be desirous of exploring the fundus oculi with a dilated pupil.

SURGERY.

The Forcible Correction of the Deformity in Pott's Disease. (*Boston Medical and Surgical Journal*, March 10, 1898.) By Robert W. Lovett, M.D.

The forcible rectification of the deformity of the spine in Pott's disease is a subject which in France and Germany is awakening the widest interest. It has hardly found its way into American or English literature yet to any extent, partly because it is all so recent and partly because each one hesitates to approach the subject in a critical way on the facts so far presented. The method is essentially one which requires the lapse of a considerable amount of time for the estimation of its real value. The method proposed is this: the patient is anesthetized, and lying on his face is forcibly pulled upon by one assistant on each arm and leg while the surgeon leaning over him presses down upon the deformity until it yields or he sees fit to desist. The patient is then laid on his back on a padded board or enveloped in plaster, from his head to his pelvis, for some months. It is claimed by some writers that permanent improvement and almost cure of the deformity may be obtained in this way. We are taught, and analogy would lead us to believe, that traumatism to bones or joints affected by tuberculous disease renders the tissues more vulnerable to the inroads of the bacillus and the general system more likely to be affected by generalization of the tuberculosis. The forcible tearing of tuberculous bone tissue has been again and again demonstrated to be risky and attended often by meningitis or general tuberculosis. For example, in twenty-seven cases of the forcible rectification of the deformity in hip disease recently reported by Raymond Sainton, five developed fatal meningitis within two or three months of operation. Objections on practical and theoretical grounds instantly occur: (1) Pott's disease is a tuberculosis of bone, of the bodies of the vertebræ, and the deformity is secondary and is an incident. It has been regarded as in a measure conservative and as Nature's preliminary to arresting the disease. The essential is vertebral tuberculosis, not deformity of the spine. Were the treatment proposed the eradication of the disease, it would place it on a different plane; but the measure deals only with a symptom and a result which is of itself distressing, and sometimes disabling but which is, on the whole, fairly well controlled by early and efficient treatment. Other things being equal it is, of course, most desirable to improve or obliterate the deformity; but the essential of any rational treatment is first to cure the disease. (2) The question of the occurrence of bony repair to fill in the gap caused by the tearing apart of the bodies of the vertebræ is, of course, an essential one. If there is to be no bony repair the operation is useless. It is asserted (Ménard) that in Pott's disease bony repair occurs, not in the bodies of the vertebral column, but at the sides and back. But Regnault quotes a specimen in the Musée Dupuytren, where a gap exists in a diseased column, but the

column is stable. One must remember, as shown by experiments on the cadaver, after rectification, that the gap to be filled may measure two to six centimeters or more. No pathological evidence beyond the specimen of Regnault has been adduced to show that bony repair of the vertebral column of a character likely to support weight is likely to occur. Chipault, the modern originator of the method of forcible correction, and the predecessor of Calot, who seems to have reaped the glory, lays much stress upon ligature of the spinous processes in Pott's disease; not only does he ligature them after forcible correction, but as a routine method of treatment of Pott's disease in children even before the occurrence of deformity he advises "ligature by a silver wire of the spinous apophyses corresponding to the diseased region, a ligature followed by immobilization." A stout silver wire is twisted from one spinous process to another, so as to embrace and steady the whole area affected. After forcible correction Chipault has either wired the spinous processes together or has clamped the laminæ together by an appliance somewhat like Malgaigne's patella hooks. A column supported in this way has, he says, double the strength of the intact column. Upon this ligature Chipault insists as one of the essentials, not only of forcible correction but of all treatment of Pott's disease in the active stage. Relapse, without this is, he says, most likely to occur. Calot claims that bony tissue fills up the gap caused by the separation of the vertebral surfaces on the ground that radiographs show it, instancing one where there were seen two beams of bone stretched across the gap after an interval of three and a-half months, eight to ten millimeters thick and two centimeters long. Again, he says that where the operation is done in two stages, weeks or months apart, distinct snaps of bony tissue are felt at the second redressement. Ducroquet has brought forward radiographs which are said to show bony repair of the gap in the vertebral bodies. The reproductions of these radiographs in his article is far from satisfying one that these statements are warranted by them. The general opinion is that the question of bony repair of the gap in the vetebræ must be regarded for the present as wholly *sub judice*. Such a process is not in line with the general behavior of bone when affected by tuberculosis and disturbed by traumatism. It cannot be dismissed as impossible, nor can it yet be accepted as proved to have occurred after the forcible correction in Pott's disease. If bony repair of the gap does not occur the operation is of questionable ultimate utility unless the spinous processes are wired, as advised by Chipault. Among those who have reported relapses are Pean, Phocas, Tausch and Lorenz and Vincent. (3) One would suppose that such operations must be attended by risk to life, but the reported casualties are surprisingly few. The cord and membranes in experiments on the cadaver have not shown signs of injury. Ménard in correcting the deformity on the cadaver ruptured a prevertebral abscess which would have found its way into the mediastinum during life. Lorenz speaks of a case where an operation was undertaken to arrest a threatened

paraplegia; permanent paralysis immediately followed of a severe type. In addition to these dangers, hemorrhage, opening up of tuberculous foci, injury to intrathoracic vessels, etc., are advanced as theoretical possibilities. It is obvious that in old cases where union has occurred fracture of the spine will result from attempts at correction sufficiently forcible. Such an accident is reported by Malherbe, where a deformity has existed for eight years in a patient twelve and a-half years old. The results quoted are surprisingly good. Calot comes first with 204 forcible corrections. There were no accidents, no deaths on the table. Two children died inside of three months, one of broncho-pneumonia and one of meningitis. In eight cases of paralysis, six cures resulted within eight days. In one case partial paralysis came on some days after correction. Twenty of his operated cases walk already but his end results are too recent to be worthy of serious consideration. He states that the x-ray shows the process of repair to be finished five to ten months after operation, sometimes requiring fifteen months. The criticism of Calot's figures made by M. Monod seems reasonable. In a critical report of the papers of Chipault, Calot and Ménard he made the statement that the statistics of Calot were too good, and for that reason would not carry weight. On the other hand, it must be remembered that Calot operates at Bercksur-Mer under the most favorable hygienic conditions; and, as one of his critics said, could venture on things unsafe in cities. Chipault has operated for four years. He says there are many relapses and that unless the apophyses are fastened together, practically all will relapse. In England, Jones and Tubbey have done eleven reductions. In six they obtained immediate and complete rectifications, in five only partial. Lorenz has been already quoted with one case of paralysis, and at the same time relapse of the deformity. Jonnesco reported three deaths in thirteen reductions, one from chloroform, one death unexplained by autopsy forty-eight hours after reduction, and one death from broncho-pneumonia after eight days. Most of the series of cases are, however, much more favorable. As far as figures go to show immediate dangers, one must admit that if representative cases are reported, the immediate results are altogether more favorable than could have been predicted on theoretical grounds. The limit of applicability is indefinite. Cases of three and four years' duration have been often corrected, and adults and children have yielded equally good results. Calot makes in doubtful cases traction of 40 to 80 kilogrammes; and if there is no yielding, he stops. Very old cases are obviously unfit for such operation. In two such cases, however, Calot has done a cuneiform resection of the posterior parts of the vertebræ and has thus accomplished reduction. This method, of course, diminishes the chest capacity remarkably. The technique is simple, the patient lies prone and is pulled apart by strong assistants pulling on the legs and arms so as to distract the vertebræ at the seat of disease. Jeannel, of Toulouse, and Vulpius, of Heidelberg, use pulleys and bands for distraction in place of assistants, and the latter advocate

suspension by the heels as the most available position for correction and the application of the jacket. Calot advises, as the first step of the operation, the removal of the spinous processes of the diseased vertebræ through a longitudinal incision which is at once sewed up. This is advocated on the ground that pressure can then be made by the flat of the hand in rectifying the deformity, which is more accurate than pressure on each side of the spines; and it is said that sloughs are much less likely to form under the jacket. On the other hand, it is claimed that the removal of the spinous processes weakens the already diseased and unstable column. Traction of 20 to 80 kilos is made by Calot, according to circumstances, and then the surgeon standing over the patient presses downward on the boss with short jerks, exerting a pressure from 15 to 40 kilos. The deformity generally yields with a succession of snaps or suddenly and easily. The patient is then held with the spine over-extended while a plaster cuirass is applied reaching from the top of the head to below the pelvis. This is changed every three or four months. Sloughs are likely to occur, especially on the occiput and over the boss. Recumbency of some months is advised, and the indication, according to Calot, for the upright position unsupported is afforded by the x-ray, which shows the formation of bone. All this seems to the American reader very indefinite and vague. Chipault lays the patient, after operation, on an elaborately arranged board for hyperextending the spine. The operation attacks, not Pott's disease, but the deformity of Pott's disease, which is not the worst feature of the affection. It expects of tuberculosis of bone a reparative power and a behavior in general which it does not possess in general. It is not apparently attended with much risk, but its real utility in *permanently* maintaining the improved position is yet to be proved. The operation is apparently not particularly dangerous. One need not use in all cases an obviously unreasonable amount of force, as advocated by Calot, but several gentle rectifications may follow each other. Paralysis may often be cured; the deformity may be largely corrected, temporarily at least, in recent cases; and in view of the decidedly unsatisfactory status of the present treatment of Pott's disease, the method is bound to be used, probably abused, advocated and decried until finally it finds its real level and is estimated at its true value. What that real value is no one can tell until much time has elapsed—time enough to show ultimate results. There has been yet no interval for the discussion of anything more than immediate results regarded in the light of the slow progress of tuberculosis of bone. Neither is it possible to say yet just which cases are best suited to this treatment. They must obviously be recent cases, that is, cases without anchylosis; and adults and children are apparently equally amenable. Beyond this nothing definite can be said. The method is of value in one way, even if time should prove it in every other to be worthless, which is altogether unlikely. It has shown us that an ambulatory apparatus can be applied which shall hold straight even a vertebral column where the bodies of the vertebræ do not exist but where they only bound

a gap. But this apparatus must include the head and shoulders. If this turns us aside temporarily from our routine of braces and jackets to remember that body weight can be supported elsewhere than on the vertebral bodies, if we are only willing to use sufficient apparatus, the method of Calot, or rather Hippocrates, will have helped conservative methods and given new energy to the efforts to prevent deformity.

A Case of Intestinal Obstruction Due to Lumbricoid Worms, Simulating Appendicitis; Operation, Recovery. (*Archives of Pediatrics*, April, 1898.) By E. H. Bartley, M.D.

The above case was in a girl six years of age, subject to attacks of acute gastric catarrh. She was seized, following an indulgence in indigestible food, with an extra severe and persistent attack, with severe pain, vomiting, etc., and on two occasions ejecting a worm with the vomit. Four days after the beginning of the attack an operation was performed and a ball of entwined lumbricoids were found in the ileum, resting against the ileo-cecal valve, completely occluding the opening. About forty worms were removed.

OBSTETRICS AND GYNECOLOGY.

Ovarian Tumors Simulating Inflamed Ovaries, Including a Case of Ovarian Myoma. (*Edinburgh Medical Journal*, May, 1898.) By Alban Doran, F.R.C.S.

The hasty removal of swollen and inflamed ovaries is greatly to be deprecated, but the early removal of ovarian tumors is important as giving the best results with the least difficulty and danger. The diagnosis between these two conditions is not always possible, as shown by the cases quoted. The most important points in favor of inflamed ovary are the presence in Douglas' pouch of an enlarged, tender, more or less movable body and accompanying pain and menorrhagia, but these signs may also be associated with new growths. As we have no symptom or group of symptoms that are diagnostic between these conditions, the patient must be carefully watched and the effects of medication duly observed, and finally an exploratory incision should be resorted to without too much delay. The diminution of pain with an increase of size under rest and medical treatment favor the diagnosis of cyst. One of the cases reported is a true myoma, derived from the muscular fibers of the ovarian ligament. This is in conjunction with a unilocular ovarian cyst, but entirely separate and distinct from it.

GIRVIN.

The Action of the Vaginal Plug in Accidental Hemorrhage. (*The British Medical Journal*, June 4, 1898.) By E. Hastings Tweedy, F.R.C.P.I.

In accidental hemorrhage, if labor pains are strong and the os is dilated, it is comparatively easy to treat the case with a good prognosis by rupture of the membranes, version, forceps or accouchement forcé. But, with an atonic or inert uterus, a long unretracted cervix and a partially opened os this is not so, and continued hemorrhage with shock and other accidents are likely. In these cases the vaginal plug is the best alternative. It prevents external bleeding, excites labor pains, induces rapid dilatation of the os and acts as a tourniquet to the uterine arteries. To secure all these advantages it must be properly applied, which is best done by using small pledgets of cotton, about the size of a small closed fist, squeezed out of an antiseptic solution and inserted without the aid of a speculum. They are packed, first, as firmly as possible around the cervix and then the vagina is filled to its utmost capacity down to the urethra. The bladder should always be emptied first and a diaper and tight abdominal binder applied last. When this pack is removed the cervix will be found to dilate and retract very rapidly and easily, and delivery can be quickly accomplished.

GIRVIN.

The Use of Quinine as a Substitute for Ergot in Midwifery. (*The Edinburgh Medical Journal*, May, 1898.) By G. Owen C. Mackness, M.D.

The advantages of quinine over ergot are its ease of administration in pill form, its stability, its tastelessness (also in pill form), and the fact that it does not produce vomiting as ergot often does. It acts rapidly and more certainly from its more reliable composition, and its chief advantage is that it does not produce tetanic contraction of the uterine walls, but merely increases the strength of the labor pains. It is of especial value in simple uterine inertia and to stimulate flagging and exhausted pains in a primipara. In these cases it often obviates the necessity for using forceps. It should be given in eight-grain doses of the sulphate, repeated in four-grain doses for two successive hours, if necessary. Although not as useful as ergot in postpartem hemorrhage, it is more useful in the hemorrhages occurring during labor. No symptoms of cinchonism seem to result from its use in this way.

GIRVIN.

A Study of Pregnancy and Labor after Amputation of the Cervix. (*Annales de Gynécologie*, January, 1898.) By Dr. J. L. Audebert.

That complications often occur in labor after an Alexander's operation or a hysteropeny is well known, but heretofore little attention has been given to the effects that Schroeder's or other operations upon the cervix have upon subsequent pregnancies. As a result of observations made upon sixteen patients, Audebert believes that the favorable opinion gener-

ally held in regard to the result of amputation of the cervix is too optimistic. The sixteen women had had twenty-two children at term and five before term previous to the operation, while after the operation they have had five at term and nineteen before term (ten before the viability of the child). The duration of the pregnancy seems to be in inverse ratio to the length at which the cervix is amputated, and, "in the absence of exact information, it would seem quite probable that in the plurality of cases the interruption or continuation of pregnancy must be attributed to the greater or lesser thickness of the section removed." In the majority of cases the progress of labor was normal, the membranes tend to rupture prematurely. The fetal mortality was 20 per cent., owing to faulty presentations that required operative delivery. Women whose cervices have been amputated should avoid all exciting causes of abortion, especially in the latter months and when dilatation of the os is prevented by sclerotic tissue the cervix should be incised high enough to admit the forceps.

L. S. Smith.

Treatment of Vomiting in Pregnancy. (*The Therapist*, June 15, 1898.) Dr. Richard Frommel.

Frommel says he does not think the explanation of hyperemesis being greatly due to nervous disturbances, holds good in the ordinary vomiting which so frequently, to a more or less degree, accompanies pregnancy, but that its cause can be attributed more to the stomach than the nervous system. He reports four cases of young pregnant women for whom he prescribed orexin, a gastric stimulant, with excellent results. Two of the cases were primiparæ, one was pregnant for the second and the other for the third time. The latter two had, during their previous pregnancies, vomited the whole time they were "carrying." Two were in the third, one in the fourth and one in the fifth month of pregnancy. In two of the cases the vomiting completely stopped after orexin had been administered for two days, while in the other two the vomiting soon decreased and completely ceased in less than a fortnight. The dose given was 4½ grains two or three times a day, followed by a little cold fluid, water or milk.

La B. J. Leamy.

Fibroid Tumors as a Complication of Pregnancy and Labor. (*Boston Med. and Surg. Journal*, June 16, 1898.) By Emma L. Call, M.D.

From a study made of seventy-seven cases, Call believes that sterility is one of the predisposing causes of fibroids, instead, as is generally believed, of fibroids being a cause of sterility, unless they be in the lower segment of the body, which usually presents mechanical difficulties in the way of conception, and the submucous tumors, which cause sterility by the hemorrhage and endometritis to which they give rise. She says she has found that a fibroid rarely attains any size before the age of thirty-three

years, which is late for a first pregnancy in a healthy woman, and, therefore, it seems probable that some other condition than the growth is the first cause of the failure to conceive. It is also well known that fibroids are especially common in single women, the cause for which seems to be a failure of the uterus to fulfil its natural function. Of the cases reported, in a number marriage occurred after the thirtieth year, pregnancy following within a year, the fibroid in such cases being apparently no bar to conception. Out of the seventy-seven cases tabulated there were only twelve of uncomplicated deliveries at term, with recovery of the mother and a living child.

La B. J. Leamy.

PEDIATRICS.

A Case of Tetany. (*Archives of Pediatrics*, May, 1898.) By Douglas C. Moriarta.

The patient was a boy aged eighteen months. He was nursed until seventeen months old. He walked at fourteen months and talked a little at twelve months. There was no indication of rickets, but the legs were quite markedly bowed. His previous illness had been a cold and a sharp attack of gastro-enteritis in the last summer. Aside from this he had always been constipated. The child sleeps well, is not fretful, and is well nourished. A few weeks before the present illness he had a slight bronchitis. The bowels were especially constipated. The child was nourished in part on ordinary table food. On being examined shortly before the present illness his abdomen was found to be hard and tympanitic. His diet was reduced to milk, and he was given a few drops of diluted muriatic acid four times a day. He improved promptly following this. Five days later he was suddenly seized with spasms. The mother noticed that for two days he seemed to waddle while walking. The attack was described by her as a "straightened-out" condition of the body. His hands, arms and both feet were stiff, and she did not think that he lost consciousness. Two hours later, when observed by the author, the fingers were found to be extended and flexed at the metacarpo-phalangeal joint. The thumbs were adducted and the wrists flexed. The feet were strongly extended on the ankle and the toes flexed on the feet. These joints were rigid, while the elbow, knee and hips seemed normal. The pupils were alike, normal, and responded to light. This condition of spasm continued uninterruptedly for seventy-two hours, after which the hands relaxed, and some time within the next twenty-four hours the feet became normal. The temperature and pulse were normal throughout. The breathing was somewhat accelerated. Nourishment was well taken. The child was only moderately fretful. He was given a high enema and a large dose of calomel, both of which were effective. In addition he was given chloral and bromide.

The recovery was eventually complete. The author considers the gastro-intestinal tract the point of origin of the trouble, either through local irritation or absorption of poisonous substances.

S. McC. Hamill.

The Therapy of Vulvo-Vaginitis in Children. (*Allgemeine Wiener Medizinische Zeitung.*) By J. Comby.

The author believes that vulvo-vaginitis is more common than usually thought in young children, and he has collected 150 cases, besides referring to other reports also giving large numbers. He mentions that the contagion in many cases has been direct from a mother, or older sister having the disease and the child being infected by coming in contact with the discharges on the bed-linen, from the same bath, or sponge. He cites one instance in which infection was due to a bath thermometer, another by direct infection at birth, from purulent ophthalmia, while in many other cases it has been from young boys suffering from gonorrhœa. He divides the cases due to vulvo-vaginitis gonococcica from those due to oxyuris, pediculosis, streptococcus, staphylococcus, bacillus coli, etc. Those cases of vulvo-vaginitis occurring with fever and other diseases are often due to a lack of cleanliness. The urethra and bladder often become involved while endometritis, salpingitis, even peritonitis may result; rheumatism may also follow as in cases of ordinary gonorrhœa. In cases where the genitals are swollen with considerable erythema, dysuria and pain, he recommends that the child be put to bed, its diet light (consisting of milk or soup with little or no meat) and the genitals washed with a boric acid solution 3 : 100, or bichloride solution 1 : 4000 and afterwards powdered and then protected by a tampon. This should be done after each urination. Care should be taken that discharges do not collect in the genital folds or back of the hymen, as this is often the cause of failure in the treatment of these cases. If irrigation of the vagina is necessary it may be done with a small canula or a Nèlaton's catheter, using sterilized water or a weak boric acid solution. In some cases a solution of potassium permanganate 1 : 2000 or bichloride 1 : 10000–5000. In protracted cases a small quantity of a solution of silver nitrate 1 : 100 introduced into the vagina with a small syringe often proves effective and in some other cases where douching is ineffective a suppository of iodoform solution and creolin 10 : 100. If the urethra is involved it should be treated carefully until the mucous membrane is perfectly healthy, for if any foci are left it is sure to give rise to fresh infection. Where the urine contains pus and blood and shows signs of a cystitis it should be irrigated with a boric acid or nitrate of silver solution and any tumor of the mucous membrane should be treated according to the rules of surgery. He mentions peritonitis and salpingitis as grave complications. He dwells upon the prophylaxis and recommends that all articles used by persons having gonorrhœa be placed out of the reach of

children. The toilet and bath should be kept separate and children affected with this disease should not play with other children not affected, especially in institutions. In the simple or non-gonorrhœal, cleanliness, with constitutional remedies for debilitated, will decrease the tendency to this malady.

NEWCOMET.

PATHOLOGY.

The Myxomatogenous Virus. (*Centralblatt f. Bakt., Parasit. u. Infektionskrank.*, June 1, 1898.) By Professor G. Sanarelli, of Montevideo.

The writer thinks that microbes exist in nature which are not capable of detection by the microscope. This opinion is supported by the bacteria of peripneumonia, so recently described by Nocard and Roux and by the description of a new disease, the myxomatous affection of rabbits, which suddenly appeared among the rabbits in the Hygienic Institute of Montevideo in the beginning of the year 1896. The symptoms were marked catarrhal blepharo-conjunctivitis of both eyes, followed by the appearance of small subcutaneous tumors in different parts of its body, but more especially of the ears and extremities. At the same time the head changes its shape, the mouth and nose thicken and the openings in the rectum and genito-urinary tract become the seat of acute inflammatory swellings, the hyperplastic process being especially well marked at the juncture of the mucous membrane and the skin, forming one of the most characteristic features of the disease. In the females the breasts become hypertrophic. The condition grows steadily worse and the animal dies in about a week after the onset of the symptoms. At the post-mortem one finds the subcutaneous tumors to be of a gelatinous appearance, of an elastic consistence and very vascular; hypertrophy of the lymphatic glands; orchitis, and an increase in the size of the spleen. Histologically the subcutaneous tumors are composed of typical myxomatous tissue rich in blood vessels. The swellings on the eyelids are composed of innumerable new formations made up of myxomatous elements, which increase the thickness of the eyelids tenfold. The swellings of the external openings are due to an œdematous tissue of a myxomatous character and the hypertrophy of the spleen and lymphatics to patches of newly-formed myxomatous tissue more or less rich in hemorrhagic infiltration. Every known means of bacteriological research was tried, without avail, to discover the organism, and Sanarelli concludes that the etiological factor belongs to none of those organized bodies which we at the present time look upon as the cause of the specified diseases. The blood, a portion of a tumor, a trace of the secretion from the lids or a portion of the intestine when properly introduced into a healthy rabbit gives rise to the disease. Urine, pleural transudate and the aqueous humor are

not virulent. The contagion is spread by the virus coming from the eyes and nose. The serum itself is virulent; and the virulence is increased as the disease passes through more animals, so strong indeed that the animal now dies in five days without the appearance of the external symptoms, the reddening of the eyelids appearing twenty-four hours before death. Attenuation of the virulence may be accomplished by allowing the serum to stand, or by the addition of antiseptics. To completely kill the myxomatogenous virus more antiseptics are required than for any known bacteria. Moist heat at 55° C. during several minutes, however, destroys the virulence of the contagious products. Mice, guinea pigs, apes and birds are not affected; in only one dog did typical symptoms appear, and in this case extensive alopecia took place in addition to the other symptoms described above. The results obtained on man from virulent serum kept for twenty-four to thirty-six hours in the incubator were, in doses of five to six cc., injected into the gluteal region, congestive phenomena in the conjunctiva and œdematous swelling and pain of the eyeball. These symptoms disappeared rapidly after the discontinuance of the injections. Vaccination and serum therapeutics have completely failed, thus again differentiating this substance for the well-known bacterian types. Two rabbits of all those attacked have alone survived the disease and this immunacy was still further increased by the numerous injections of virulent blood.

CATTELL.

RHINOLOGY.

The Soft Catheter in Plugging the Nose. (*Boston Medical and Surgical Journal*, December 30, 1897.) By M. P. Smithwick, M.D.

Employment of the soft-rubber catheter in plugging the nose requires no suggestion to those familiar with its use in nasal feeding. Except in nasal operations under a general anesthetic, it is rarely necessary to plug the nose. Experts are usually correct in considering the frequency with which one resorts to this procedure in cases of spontaneous epistaxis to be inversely as his skill. A soft-rubber catheter, a string more than twice the catheter's length (waxed dental-floss is excellent), a wire (the stilette of a gum-elastic catheter will do if the soft catheter is shortened), material for a plug, some styptic and a lubricant are necessary. A solution of cocaine is helpful and may be necessary to shrink the parts. Forceps are convenient. An end of the waxed string wound about the end of the wire is passed through the catheter. Bring the ends of string together behind the catheter. Lubricate catheter; pass along floor of nostril, and, when the tip appears below the soft palate, grasp with forceps and draw it out of the mouth. Draw out the half of string not contained in the catheter. An end of the catheter carrying an end of string now projects from a nostril and from the mouth. Attach the plug and draw it near to the

catheter's tip, leaving outside the plug sufficient string to project from the mouth when the plug is in position. Then withdraw from the nose the catheter and, until the plug is fixed firmly in position, the string simultaneously. Considerable swelling, at least of the soft palate, will follow. If the plug is aseptic there need be no apprehension.

A Case of Coryza Apparently of Dental Origin. (*Lancet*, January 1, 1898.)

At a recent meeting of the Manchester Odontological Society Mr. E. P. Collett brought forward an interesting case of coryza due apparently to dental irritation. The patient in question, a medical man, had suffered from persistent coryza, mainly unilateral, for three or four weeks. He consulted a colleague who carefully examined him and was unable to find any physical cause except some stigmata on the middle turbinated bone associated with general vaso-motor dilatation of the membrane. A 4 per cent. solution of cocaine was prescribed for local use together with general treatment. The coryza, however, did not lessen, and neuralgic pain in the region of the temple, over the malar bone, and subsequently behind the right ear, supervened. He then consulted Mr. Collett, who removed the first maxillary premolar which showed signs of chronic periodontitis. No pus was evacuated. The pain had entirely gone by the morning following the removal of the root, the coryza completely disappearing in the course of three days.

CUTANEOUS AND VENEREAL DISEASES.

The Local Treatment of Cutaneous Syphilis. (*The Philadelphia Polyclinic*, April 2, 1898.) By Arthur Van Harlingen, M.D.

The author is impressed by the fact that the syphilitic disease is a local as well as a general affection. During the period of incubation, local treatment, excepting of the initial lesion, is impossible. So soon, however, as the general eruption breaks out we should at once get the skin in as healthy a condition as possible by means of frequent bathing, with disinfectant and antiseptic soaps, and we should, at the same time, be on the lookout for the particular thickened moist patches, known, when they occur in the mouth, as mucous patches, but which are liable to be found about the anus, on the adjacent surface of the scrotum, and thigh and, in fact, wherever warmth and moisture favor the maceration of the epidermis. There are several plans by which we may diminish the virulence of these mucous patches and at the same time hasten their cure. An indispensable preliminary to all applications is a thorough cleansing of the parts, and this is best accomplished by means of hot water and some medicated antiseptic soap. The mercury bichloride soap is perhaps the best. Its medical virtues are slight, but it is an excellent preliminary to more active treatment.

After thorough cleansing of all the moist and discharging lesions, those on the external skin are best treated at this stage by solutions of silver nitrate. Such solutions are preferable to the solid stick, which comes so convenient to the doctor's hand in such cases, but which is too apt to have a destructive rather than a curative effect. The strength of the solution should be from 5 to 50 per cent., and it should be applied by a little wad of cotton to the previously dried surface of the moist patch. We thus form a protective coating of coagulated albumen, which at the same time favors the cure of the lesion and renders it for the time being innocuous to others. After this a little dithymol diiodide finely powdered or some similar substance may be dusted over the lesion to absorb any further moisture. When mucous patches exist upon the lips, tongue, buccal mucous mem brane or tonsils, these demand constant attention and local treatment, both for the protection of the patient and even more especially for the protection of others. The silver-nitrate solution or stick is not strong enough for these lesions. They are to be dried carefully with a bit of rag, but not with absorbent cotton, which sticks all about the mouth and gives the patient unnecessary annoyance. As each individual lesion is dried, a solution of mercury nitrate, made by mixing one part of the "liquor hydrargyri nitratis" with from ten to twenty parts of distilled water, is lightly brushed over the surface. Where there are mucous patches about the roots of the teeth and on the gums, hydrogen dioxide should be freely used for cleansing purposes. Indeed, in all syphilitic lesions of the mouth extreme cleanliness must be enjoined. When we find a mouth filled with decayed and broken teeth, the interstices of which contain the decaying food of one or more meals, we have a condition of things highly unfavorable to the cure of mucous patches, and when in addition the patient habitually uses tobacco, we may give an unfavorable prognosis as to entire or at least speedy cure. Under such circumstances he has known patients to carry about these contagious mouth-lesions for years, during which they remained a menace to all around them. Those lesions, which may be said to belong to the middle period of syphilitic development, the crusts on the scalp, the band papules encircling the forehead just beyond the line of hair, the palmar and plantar lesions, etc., are sometimes left to themselves, so far as local treatment goes, but this is a mistake. The disfigurement which they cause and their highly characteristic appearance are apt to cause patients to manifest extreme anxiety to have all such traces of disease removed with the utmost rapidity. Ointments containing mercurial salts, as the oleate, white precipitate or mercury nitrate, in various strengths, may be used on these lesions with great advantage. The old-fashioned mercurial ointment is unsightly and disagreeable to use, while it it is no more efficient than the other ointments. When cosmetic effect is desirable, considerable help may be gained by applications of alcoholic solutions of 1 to 10 per cent. mercury bichloride, or solutions of the same strength in collodion. When weak, such solutions may be trusted in the hands of intelli-

gent patients, and will be found to aid greatly in the treatment of the obstinate ringed eruptions of the middle period of syphilis. In the earlier period of generalized syphilis, he employs local treatment to assist in the cure, and also to prevent the spread of the disease. In the middle period he uses the same treatment to cure, and also for its cosmetic effect to remove in the shortest possible time the unsightly blemishes caused by the eruption. In the later period of syphilis, however, that stage formerly known as the "tertiary period," he employs local treatment, not merely as an adjuvant, but also in many cases as an active agent in the cure of the various manifestations. For, it is a characteristic of these later manifestations not only to take on the appearance and to simulate closely various non-syphilitic eruptions, but also to assume at times the nature of erythema, of inflammation, of abscess, of suppurations and ulcers, and even of malignant growths. The transformation of syphilitic eruptions into epitheliomata is by no means excessively rare, and late syphilitic eruptions are said by some foreign writers, in rare instances, to have become transformed into lupus. There is, therefore, plenty of opportunity for local treatment in the late lesions of syphilis. When pain, heat and the other accompaniments of inflammation are found in connection with an eruption which is manifestly of a syphilitic nature, it is next to useless to attack the disease by anti-syphilitic remedies alone; these will frequently do no more than aggravate the disease. It is better to postpone all specific treatment and use sedative lotions and mild but appropriate general treatment at first, and then, when the acute symptoms shall have passed away, we can return to specific treatment with a far better hope of success. These remarks refer primarily to the non-suppurative lesions, but when we have suppurative syphilitic lesions a new element enters into the problem of treatment which must be seriously reckoned with if we would hope for rapid and satisfactory results. It should never be forgotton that suppuration and pus-formation with the self-poisoning which follows should be combated from the beginning. Abscesses should be opened and cleansed at once, rupial and other crusts and débris gotten rid of, ulcers kept thoroughly cleansed, and as nearly complete antisepsis as possible carried out. With these principles in mind, and with that attention to detail which is nowhere more important than in the management of syphilitic eruptions, we may engage in the treatment of this disease with the certainty of quicker and more satisfactory results than when a routine administration of mercury and potassium iodide is alone relied upon to effect a cure.

PRACTICAL NOTES.

Hæmatemesis.—Robin (*Med. Press and Circ.*) says that the best symptomatic treatment of hæmatemesis is as follows: As soon as you are called to a patient who vomits blood you must order him to bed, enjoin absolute immobility, give a hypodermic injection of ergotin over the epigastrium, and then apply ice. Internally, from one to two grains of opium should be given, and every two hours a spoonful of the following mixture:

℞.	Ergotin,	ʒj.
	Gallic acid,	gr. x.
	Extr. of opium,	gr. ij.
	Syrup of turpentine,	ʒj.
	Water,	ʒiv.

For the syncope that may occur you should employ the usual remedies —horizontal decubitus, head low, injections of ether, flagellation, mustard leaves to the legs. Where symptoms of peritonitis set in, indicating perforation of the stomach, you should use hypodermic injections of morphine. In the event of the vomiting becoming incoercible, you should order from eight to ten drops of the following preparation in a small quantity of water, to be repeated at intervals:

℞.	Picrotoxine,	gr. j.
	Hydroch. of morphine,	gr. j.
	Sulphate of atropine,	gr. $\frac{1}{30}$.
	Ergotin,	gr. xx.
	Water,	ʒij.
	Alcohol, q. s. (to dissolve).	

Besides the immediate accidents, hæmatemesis may be followed by other effects which should not be forgotten. The blood which has not been rejected may decompose and provoke putrid fermentation, especially in cases of constipation. The odors of the matters last vomited and of the breath of the patient will warn you of this condition. In such cases, purgatives are indicated in order to evacuate the intestinal tract as quickly as possible. Besides enemata of antiseptic solutions you may give a powder composed of:

℞.	Calomel,	gr. ij.
	Jalap,	gr. vj.
	Hydrated magnesia,	gr. xx.

When the patient has got over his attack he will generally remain anæmic and debilitated. Preparations of iron become imperative, and preference is given to the perchloride, as it is hæmostatic as well as ferruginous. At the end of ten or twelve days it should be suspended, or it will act as an irritant to the gastric mucous membrane.—*Practitioner.*

The Treatment of Inevitable Abortion with Special Reference to Points of Treatment in Accidental Hemorrhage.—In the treatment of inevitable abortion our first consideration is the period of gestation. When an abortion occurs during early pregnancy (*i. e.*, before formation of placenta) the ovum is not very firmly attached to decidua, consequently the patient is not exposed to the serious risks which occur at a later period. Pain and hemorrhage are usually severer than that of an ordinary caeamenia, the former being due to uterine contractions with expulsion of clots through an imperfectly expanded cervix. Cases of this description are frequently mistaken by patients and friends for a profuse and delayed menstruation. In the treatment of such during the first two months perfect rest may suffice to avert expulsion, but should hemorrhage be free, persistent, and prolonged, incomplete detachment of decidua is indicated, and it becomes absolutely necessary to speedily remove the cause of mischief. In the majority of cases expulsion of ovum with unruptured membranes is the rule.

It is more particularly in cases of incomplete abortion, between the third and seventh month, and cases of hemorrhage from placental detachment, in which the hemorrhage is of the accidental form, as distinguished from unavoidable in placenta prævia, that our skill is severely taxed. Our treatment of the latter form, in which bleeding always increases during pain (from placental detachment), and in which the relation of placenta to fœtal head is the opposite to that in which accidental hemorrhage occurs, authors are well agreed, definite lines for treatment being expressed, but in accidental hemorrhage, one of the most dreaded complications, writers have shown most marked disagreement as to treatment. Promptitude is here our watchword, for in the whole range of midwifery no case requires more self-possession. There are several reasons why, if actual labor is not in evidence, we may be perplexed as to the conditions producing the hemorrhage, *e. g.*, the hemorrhage associated with atonicity of uterus and those which are not. Should the uterus be passive our duty is clear ; on the other hand, with a contracting uterus, plus strong pains, and expanding of os, prognosis is good and delivery easy. In inertia with cervix elongated, and unretracted, and a slightly dilated os, we have a grave condition to deal with. Rupture of membranes does not bring about contractile action for long, the hemorrhage is almost certain to continue, and the operator is frequently compelled to remove the retained products as rapidly as possible. Recurrent hemorrhage (intervals in which pain and bleeding cease) often lead to postponement of operative procedure. The surgeon may be too facile or compliant, but here the fact should not be forgotten that for want of intimate vascular connection with the uterine wall, the vitality of the detached part is lost for ever, rapid retrogenic changes take place, with septic phenomena, *e. g.*, febrile disturbance, acceleration of pulse, shivers, sweats and fœtid discharge. The patient should now be regarded as no longer pregnant. This state warrants active measures with a view to determine the best methods for ex-

pulsion of the products of conception. Forcible dilatation with rapid delivery is enjoined by some, condemned by others; its drawback is the very profuse hemorrhage from open branches of uterine artery, to say nothing of the condition of extreme shock produced, which, in the majority of cases, the patient does not survive. Hastings Tweedy declares that a Porro's operation is often a less hazardous proceeding. The cervix must be dilated, and the best method is to tampon the vagina. Here we have a simple line of treatment capable of obviating the dangers mentioned above, for the plug acts as a tourniquet to the uterine vessels.

It is now generally conceded that a well applied tampon not only produces dilatation without laceration of the os, but without the loss of a single layer of its epithelium, a point so very essential as a preventive to invasion by germs. A great advantage arises in the event of concealed hemorrhage still flowing—the intra-uterine tension is increased, and there is less chance of systemic leak, especially if an abdominal binder be properly adjusted. If forcible pressure be made on the vaginal vault in the region of the lateral fornices the arteries become bent acutely, and the flow is thereupon instantly controlled. This is brought about through the drag exerted on the cervical branches. Hastings Tweedy has pointed out very clearly from abundant clinical observation in the Rotunda, that blood will not flow to any serious extent above a properly fitted tampon. To accomplish the operation of plugging I have in recent cases used pieces of cotton wool each the size of a tangerine orange dipped in 1 in 4,000 bichloride, or 1 in 80 carbolic. The patient is brought well to the edge of the bed, with head low, and pillow under the hip, decubitus left semiprone, the vulva and vagina are previously well asepticized with one of the solutions, the bladder emptied, the plugs are introduced one by one, firstly squeezed dry and compressed tightly, without a speculum, until the cervix is well surrounded in the cul-de-sac; the os is then covered. To gain the continuously acting stimulating action it is necessary to pack as tightly as possible in order to fill the vagina to its utmost capacity, a diaper being then placed between the thighs; a stout abdominal binder completes the operation. The patient has time to rally and stimulants and nourishment can be freely administered.

The operation is over in a few hours. I discard hydrostatic bags, tents and sponges. The latter, unless removed often, soon becomes a filthy or septic plug. The after-treatment I regard as most important. I never forget to wash out a uterus directly after removal of placenta, whether removal has taken place by natural expression, or digital curettage. The facility with which it can be irrigated immediately after operation is a strong argument in favor of the proceeding. I have always employed the method taught by Professor Duke, of Cheltenham, viz., plain warm water (previously brought to the boiling point), which then acts as a stimulant to the patient, removes imperfectly decorticated placental bits, provokes contraction and lastly ensures permanent contraction of uterus, with an

untainted cavity by washing away maternal and fœtal shreds small enough perhaps to elude the hand, yet a possible source of danger.—*E. R. P. Watkins in Medical Times and Hospital Gazette.*

Catarrhal Jaundice.—In Dr. Riesman's clinic, recently there were two cases of catarrhal jaundice. One of these presented the usual gastro-intestinal symptoms, which were the result of a debauch, while in the other they were absent. Dr. Riesman pointed out that catarrhal jaundice might occur without any antecedent gastro-intestinal manifestations. The second case, after having been under treatment for ten days, with slow improvement, was, at the suggestion of Dr. Swan, put on quarter-grain doses each of silver nitrate and extract of hyoscyamus. Thereafter the patient rapidly improved. The silver salt was used with the idea of influencing any duodenal catarrh that might be present.—*Philadelphia Polyclinic.*

The Surgical Treatment of Fibroid Tumors of the Uterus.—Goelet publishes a paper under this heading in the *American Journal of Obstetrics and Diseases of Women and Children* for January, 1898. He says the surgical procedures which may be adopted in this class of pelvic tumors are: curettage, division of the uterine arteries, myomectomy, both vaginal and abdominal, and hysterectomy.

Since electricity affords only symptmoatic relief in a certain class of cases, and this is not always permanent, its use may be limited to inoperable cases, classing under this head cases where the constitutional condition or cardiac disease prohibits or where the patient refuses to consent to operation. The prejudice against operation for uterine fibroids is being rapidly removed, first, because the mortality of total removal has been greatly reduced, and second, because the feasibility of more conservative procedures has been demonstrated. For instance, an extensive myomectomy, where the uterus is the seat of numerous fibroids, is successfully done to-day and the uterus saved, whereas only a few years back the whole organ was removed in such cases. Again it has been shown that complete atrophy of certain small tumors of this character may be brought about by permanent obliteration of the uterine arteries, which diminishes their nutrition. The possibility of conservative surgery is appreciated because the evil results of some of our older methods is pretty generally understood. Hence the author would say the prejudice against operative interference is being removed because surgery is less radical and the mortality of radical operations is reduced.

Of the operations enumerated above curettage may be regarded as a palliative measure only, to be employed for controlling temporarily the hemorrhage, which is often profuse and persistent, and which so rapidly exhausts the strength of the patient. It is to be employed also to overcome the obstinate endometritis when any procedure less radical than hysterectomy is done, such as division of the uterine arteries or myomectomy. It is a

secondary but nevertheless an important auxiliary measure which should never, in the author's opinion, be neglected. It is only a temporary expedient against hemorrhagic endometritis, because the endometrium is rapidly reproduced, and, since the same causes which reproduced this condition still exist and have not been removed, the hemorrhage must sooner or later occur.

Of the method of performing this operation, which is generally regarded as simple, much may be said to advantage. It involves more risk in the fibroid uterus, because the walls may be quite thin in places, or soft and spongy and easily perforated. Again, owing to the irregularity of the cavity it is quite difficult in some cases to make the curettage thorough. The ordinary dilator employed for dilating the cervix is frequently inadequate because it is not sufficiently rigid, especially if the growth is near or encroaches upon the cervix, and because the blades of the instrument are too short to effect dilatation sufficiently far up. Great care should be exercised also to avoid exerting too much force or allowing the instrument to slip and produce laceration.

The ordinary curette is likewise inadequate in some cases, because it is too short and does not reach far enough up into the cavity, and it has not sufficient rigidity to enable the operator to remove all that is necessary.

The irrigator ordinarily used for washing out after the curettage is also too short to reach the full length of the cavity, and the tubing employed for conducting the irrigating fluid is too small to furnish a stream of sufficient force and volume even if the reservoir is placed high.

For curettage of the fibroid uterus, then, special instruments are required, and more than usual care is necessary, both for safety and thoroughness.

In all of these cases the curettage should be followed by a copious irrigation, with a double-current irrigator, of a hot 1 per cent. solution of lysol to remove clots and débris, and after this a solution of iodine should be used through the irrigator. The strength of this solution may vary with the necessities of the case—from half to an ounce of the compound tincture of iodine to a pint of water. In the author's opinion this is the only way iodine should be applied to the interior of the uterus.

The operation for ligature of the uterine arteries, for the purpose of producing atrophy, by depriving these tumors of sufficient circulation and nutrition, has been successful when it has been done in appropriate cases and when obliteration of the vessels has been made certain by dividing them. The author has pointed out elsewhere the fallacy of depending upon simple ligation to effect permanent obliteration of these vessels, chiefly because it is difficult to isolate them so that the ligature will destroy the artery; and if a mass of tissue is included in the ligature with the vessel, it shrinks in consequence of the compression and the ligature loosens. Consequently the circulation may be, and frequently is, restored. This would, of course, fail to accomplish the purpose of the operation.

The technique of this operation is as follows: First, the uterus is curetted, and if hemorrhage has been a symptom it is irrigated with a solution of iodine. Then a traction ligature is passed through both lips of the cervix, by means of which it is drawn well down and over to one side, the patient being in the lithotomy position with a short-bladed perineal retractor in the vagina. A semi-circular incision is made through the vaginal roof on one side at the cervico-vaginal fold, and the base of the broad ligament is exposed by careful dissection with the fingers, hugging the side of the uterus. When the pulsation of the uterine artery can be detected a stout silk ligature is passed around it by means of a specially devised aneurism needle or ligature carrier, and tied. Especial care is necessary to avoid including the ureter in the ligature, as at this point it is only half an inch from the uterus. The tissue between the ligature and the uterus is then divided with the scissors, and the uterine end of the artery is then picked up with a pressure-clamp and tied with silk or catgut. The same manœuver is repeated on the other side. The vaginal incisions are closed by continuous catgut suture and a loose dressing of gauze placed in the vagina. Of course, strict aseptic measures should be carried out, both in the preparation for and during the progress of the operation.

The limitation of this operation to such tumors as may be influenced by cutting off the supply of the uterine arteries is important, and upon this depends the success which may follow. It would be unreasonable to expect very large tumors which fill or nearly fill the abdominal cavity to be influenced materially by this procedure, since the other sources of blood-supply are greatly increased as the tumor develops out of the pelvic cavity. The uterine arteries are not the chief source of nutrition in these cases, as they are when these tumors are smaller. The other main channels of circulation, the ovarian arteries and round ligament arteries, are not only greatly increased in size, but these tumors are frequently fed by new vessels established through adhesions with adjacent organs and structures. When, however, the tumor is small or has not developed above the level of the umbilicus, the uterine arteries furnish the chief blood-supply. Likewise, when a subperitoneal tumor springs from or near the fundus, it gets its blood-supply chiefly from the ovarian arteries, and cutting off the uterine arteries cannot be expected to influence the growth materially in these cases.

This operation should therefore be limited to small interstitial growths which have not developed beyond the umbilicus, and small subperitoneal tumors which spring from the wall of the uterus below the fundus. When the operation has been confined within these limits, and when the author has made permanent obliteration certain by dividing the arteries, complete or almost complete atrophy of the tumor has followed.

Myomectomy ranks deservedly first in the order of conservative operations for uterine fibroids, being radical in its conceptions, though it preserves both uterus and ovaries. Until quite recently this operation had a

very limited application and its possibilities were not fully appreciated. For some time past pedunculated tumors have been removed, and occasionally one or two small fibroid nodules projecting above the surface of an otherwise healthy uterus have been also removed by enucleation; but where there were numerous interstitial masses, or even one large tumor, the uterus was invariably sacrificed together with the appendages. Even now, though the successful possibility of an extensive myomectomy has been satisfactorily demonstrated, there are many uteri being sacrificed every day for small tumors which might easily be removed without the uterus.

It is possible to remove successfully not only one or two but numerous interstitial fibroids, large and small, situated deeply in the uterine wall, shelling them out of their bed, closing the wound afterward by suture, and leaving the greatly hypertrophied uterus to regain its normal condition. The operation is one which requires much more operative skill than hysterectomy, and where it is extensive it is fraught with greater danger on account of hemorrhage and the increased risk of sepsis. Hence the strictest aseptic technique must be carried out. The ligatures and sutures must be applied so as to control absolutely all bleeding and close the wounds in the uterine wall perfectly, so as to avoid dead spaces where blood or serum may collect and undergo decomposition. There is practically no limit to the number of tumors which may be removed in this manner, and though the uterus may afterward resemble a battle-scarred veteran, it is saved to the patient and will subsequently recover and may be a useful organ.

A few points in the technique may be useful to those who are not familiar with the operation. The abdomen is opened by an incision sufficiently large to deliver the uterus with tumors out of the abdomen, when this is possible; the peritoneal cavity is protected by a sterilized rubber sheet or flat gauze pads, and when much bleeding is anticipated a rubber ligature is placed around the cervix. When the uterus cannot be lifted out of the abdominal cavity the intestines must be protected by gauze pads, which wall them off from the field of operation. Sometimes the Trendelenburg position is a decided advantage. In removing pedunculated fibroids a flap is made on either side of the pedicle at its base of attachment to the uterine wall. These flaps are stripped down and the pedicle severed by a V-shaped incision below the level of the surface of the uterine wall. Any redundancy of the flaps is trimmed off afterward. Bleeding vessels are controlled by pressure forceps, and, when necessary, a ligature, but both are to be avoided when possible. Free bleeding will be controlled frequently by the sutures employed for closing the wound, which may be applied immediately before the removal of other masses is proceeded with, or the wound may be packed tightly with sterilized gauze until all the tumors are removed. In removing sessile and deep interstitial growths the uterine wall over the center is split and the capsule of the tumor is laid open; then the tumor is shelled out of its bed by the

fingers or the handle of the scalpel. It is important before closing the wound to trim out all loose tissue which would subsequently slough. Perfect coaptation is absolutely essential, hence deep-buried sutures, preferably of fine chromicized catgut, should be employed; Lembert sutures of the same material or fine silk used for the outer layer closing the peritoneal surface.

Two points must ever be kept in mind—the liability to hemorrhage and sepsis—and every precaution should be taken to avoid both. With care, however, the chance of either may be reduced to a minimum.

Usually this operation is best executed through an abdominal incision, as it affords freer access and permits more accurate work. But when there are one or two small nodules projecting from the uterine wall low down near the cervix, their removal may be accomplished through a vaginal incision either anteriorly or posteriorly to the cervix, according to their location.

Myomectomy, then, should be the operation of election in all cases where it is possible without entailing too great risk. So strongly is the author convinced of the possibilities of this operation that he believes it is applicable in seventy-five per cent. of the cases where now hysterectomy is generally done.

Submucous fibroids projecting into the uterine cavity may usually be removed through the cervix, but it may prove a tedious and difficult operation if the tumor is pedunculated or detached, on account of the difficulty in dilating the canal sufficiently to permit free access into the uterine cavity. When these tumors are very large, however, and their development causes the uterus to project well up into the uterine cavity, a correct diagnosis of their exact character is not always easy, especially if the cervix is small and the canal is contracted. If a correct diagnosis can be made in these cases, it is not always possible to empty the uterus through the vagina. It is possible and feasible, however, in such cases to empty the uterus through an abdominal incision, as in Cæsarian section, and leave the uterus behind if the walls have not undergone degeneration, thus saving it. If, then, upon opening the abdomen, either for the purpose of a myomectomy or a hysterectomy, it is found that the tumor is not in the wall of the uterus but within the cavity, the uterus should be delivered through the abdominal incision, a rubber ligature placed around the cervix, the abdominal cavity protected by a rubber dam or pads of sterilized gauze, and an incision made in the anterior uterine wall from the fundus to near the attachment of the bladder opening, into the cavity. If the tumor is pedunculated it is easily removed by severing the pedicle near its attachment. If it is broadly attached to the uterine wall the mucous membrane, with the capsule, is split and the tumor shelled out. Active bleeding is controlled by ligature or by sutures which compress and coaptate the raw surfaces. After the uterus has been emptied the cavity is washed out if necessary, and a gauze drain or rubber drainage tube is carried down

through the cervix into the vagina. The incision in the uterine wall is closed by deep interrupted sutures of chromicized catgut,which include the muscular layers down to but not the mucous membrane. Done in this manner there is absolutely no chance of infecting the peritoneal cavity and there is little or no blood lost. Though this operation may involve more risk than a hysterectomy in the same condition, it is fully justified, since it preserves the uterus, which may subsequently become a useful, functionating organ.

Of hysterectomy there is little to be said except as to its limitation. The author cannot now believe that vaginal hysterectomy for fibroid tumors is necessary or justifiable, since tumors which are sufficiently small to permit of their removal in this manner either may not be interfered with, or, if they are causing trouble, atrophy may be secured by dividing the uterine arteries; or if the condition is not appropriate for this operation, the abdomen may be opened, a myomectomy done, and the uterus saved. The conscientious surgeon would surely not sacrifice the uterus, to say nothing of the unnecessary risk to which the patient would be submitted, when these other channels are open to him. Abdominal hysterectomy for uterine fibroids is ever a justifiable operation in those conditions where other operations are not feasible, and especially when the tumor is so large as to cause great inconvenience from its size, or where the tumor has undergone degeneration or the appendages are hopelessly diseased.

The technique of this operation has been thoroughly discussed and is familiar to us all. Likewise the pros and cons of supra-vaginal amputation and total extirpation have been gone over again and again, and there would be nothing gained by repetition here, since the adaptability of either method is pretty generally understood.—*Therapeutic Gazette.*

The Treatment of Syphilis.—It must appear odd, to say the least, to those who have been brought up to regard mercury and the iodides as trustworthy remedies in the cure of syphilis, to find that these therapeutical gods are not universally worshipped. Curiously enough, the views of specialists with regard to the value of the mercurial treatment seem to be influenced by geographical considerations. In France, for instance, treatment by mercury is *de rigueur*, and practitioners administer it with a free hand, while in England small repeated doses are the rule. In Germany and Austria, however, the genuineness of the mercurial treatment in modifying the course of the disease is called in question by a large and powerful faction of specialists. Not less remarkable is the divergence of views as to duration of treatment. In France the ideal treatment, according to Fournier and his school, is a four years' course, in England from twelve to eighteen months seems to be about the average, while in Germany it is authoritatively denied by some that either dosage or duration of treatment has any permanent effect on the course of the disease, though it is admitted that mercury and the iodides do possess a specific influence over

certain manifestations of the disease. We are confronted at the outset by the difficulty in getting authorities to agree as to what constitutes "cure." On the strength of Mr. Hutchinson's teaching, we usually believe that the sequelæ and later manifestations are due, not to the active infective virus, but to the pathogenic effects produced during its sojourn in the organism in a condition of activity. If a gumma, for instance, is to be accepted as evidence that the disease has not been cured then it cannot safely be affirmed that any particular case has been cured, or that the disease has died a natural death, because none can foretell whether a given patient will or will not have this or some other late manifestation of previous syphilitic infection. Admitting that mercury exerts a modifying influence over the secondary symptoms, it is argued that its curative effects must be measured, not by its influence on the secondary manifestations, but by subsequent freedom from the so-called tertiary symptoms. According to Neumann, of Vienna, whose lecture appears in another column, statistics do not support the view that early treatment, however carefully carried out, has any marked effect in preventing these later manifestations, and if we accept his figures, we should be constrained to admit that treatment does not materially modify the subsequent course of the disease. On the other hand, if the supervention of these later phenomena is to be held to indicate the continued presence in the organism of the germs of syphilis, it must be supposed that they possess the faculty of lying dormant for periods of time which may reach half a century, giving rise to no constitutional or functional manifestation, during which period the syphilitic parent may beget perfectly healthy offspring, and yet that they may, without rhyme or reason, spring anew into activity, and give rise to their characteristic effects. A much more plausible hypothesis is that which regards these later manifestations as the outcome of a peculiar proneness of certain tissues to undergo particular changes, resulting from the passage through the organism of the virus, causing lesions not of themselves syphilitic. This view is supported by the fact that mercury no longer exhibits its inhibitory or resolvent action in the later stages, thus showing that the lesions are only the indirect effects of the specific contamination. The early symptoms of syphilis are, generally speaking, tolerably uniform in their incidence, though their severity may, of course, vary within very wide limits. No such uniformity is observable in the tertiary or later symptoms. Some patients get gummata, other have iritis, others again remain more or less prone to cutaneous troubles. The factor in determining the precise incidence of these lesions evidently resides in the individual patient and not in the malady from which he has suffered, and this supports the view that an attack of syphilis leaves behind it a deterioration of certain tissues, the site of the resulting lesions being determined by the constitutional predisposition of the patient. We know as a matter of every-day experience that a previous attack of syphilis tends to modify any morbid proclivity on the part of the sufferer, thus a patient prone to

psoriasis will suffer from an abnormal form of the disease, the characteristic features of the skin lesions being modified by the tissue vulnerably created by the preëxistent syphilis. It is not unreasonable to assume that the occurrence of iritis in a syphilitic patient is the corollary of a previously existing liability to inflammatory affections of that particular structure and so on. On the whole, syphilographers will not abandon the idea that syphilis can be cured by treatment without much more conclusive evidence than has so far been adduced. Before any decided opinion can be arrived at on this vexed question, however, it will be absolutely necessary to decide whether the later symptoms are to be regarded as essentially syphilitic, or only as the occasional and indirect effects of deterioration of tissues. One point has, at any rate, been conclusively proved, viz., that no form of preventive or abortive treatment has any marked effect in destroying the virus or in guaranteeing the sufferer against subsequent manifestations. There remains one point to which attention has not been called. The most radical of the so-called preventive methods do not comprise treatment before the initial induration, but it is evident that by this time the infection must have gained a hold on the system. It would be interesting to know whether syphilitic infection is possible in a constitution previously saturated with mercury, a condition of affairs which might present itself in workmen employed in quicksilver mines, or other industry where mercury is manipulated. This would, at any rate, settle the question whether mercury is really a specific against the germ of syphilis.—*Medical Press.*

Ingenious Catheterization.—Dr. Neumann describes in the *Deutsche Medicinische Wochenschrift* a simple and ingenious way of obtaining urine from a particular ureter for diagnostic purposes. He makes use of an instrument constructed something like certain Japanese fans, in which the fan can be withdrawn into the handle. He pushes this instrument into the bladder, maintaining it in a central position, and he then extrudes the fan which is provided with a convex border and fits with approximate accuracy against the posterior vesical wall.—*Medical Press.*

Metrorrhagia of Puberty and Its Treatment.—Romme (*La Presse Méd.*, May 4, 1898) says that the metrorrhagia of puberty is a particular type of this trouble, and is due to a debilitated state of the system from tuberculosis, rheumatism, or some other disease, the uterus, however, being in an essentially normal condition. The metrorrhagia usually follows the first attempts at menstruation, and the flow of blood is either constant, or if it ceases when the patient is absolutely quiet, recurs upon the least effort. Examination yields negative results. Hydrotherapy, with massage and friction of the whole body with rough gloves, gives satisfactory results. Sea-bathing is a powerful restorative, but must be commenced with great caution. An out-of-door life and moderate exercise, with a bicycle or in some

other way, supplemented by such tonic and laxative medicines as may be called for, generally effect a cure. There is little help to be expected from local treatment, though a weak antiseptic douche may be used to prevent infection in the upper genital tract. Curettage is rarely indicated. For hemorrhage which threatens immediate danger the patient should be kept on her back and ice applied to the abdomen, or hot vaginal douches be given.—*Medical News.*

The Acne of Young Girls and Its Treatment.—Brocq (*Rev. de Therap.*, May 15, 1898) says that most girls who are troubled with acne of the face are continually rubbing and scratching it, not so much on account of any feeling of itching as because of an irresistible impulse to do so, which may well be compared to a mania. Hence the importance of requiring them to wash their fingers and brush their nails many times daily with a solution of boracic acid in order to avoid infection.—*Medical News.*

Venesection in Children's Diseases.—A. Baginsky (*Berl. klin. Woch.*, May 23, 1898) first refers to the history of venesection, and discusses the question as to whether there are not some diseases in which it might be used with benefit. He gives details of two cases in which it was successfully employed: the one in a child aged seven and a-half with uncompensated cardiac disease, and the other in a boy aged nine with cirrhosis of the lung and bronchiectasis. In these cases the author thinks that the venesection exercised a life-saving effect in the dangerous suffocative attacks. Details are then given of a third case of broncho-pneumonia in a child, aged seven, who was *in extremis*. As no blood could be obtained from the median veins, the left radial artery was opened, and 30 c.cm. of blood let out. The effects of the venesection in these cases is a mechanical one of relieving the circulation. Baginsky has not always had the good results noted in these three cases, but there were then other dangers present besides the mechanical hindrance to the circulation. Venesection is more difficult in children than in adults. It is better to lay bare the vein under aseptic precautions, and then to open it. The author refers to the more local blood-letting, as by leeches. There are particularly two forms of disease in which such blood-letting may be of use, namely, simple eclampsia in the child and uræmic eclampsia. There are many valuable remedies for simple eclampsia, so that it is less necessary to perform venesection here unless these remedies fail. Here, also, venesection acts in a mechanical manner. The author says that he has employed this measure in a considerable number of cases of eclampsia, and he gives details of one in which it was used with the best results. In this case of uræmia, baths with douches, chloral hydrate, chloroform, injections of camphor, mustard, etc., had been employed without effect. The child was deeply comatose, with Cheyne-Stokes breathing. It was also cyanosed and pulseless.

Six leeches were applied to the head. The convulsions became less at once, and the child slowly recovered. Thus in uræmic eclampsia where other treatment has been used in vain venesection should be tried. Baginsky concludes that blood-letting is not only indicated, but necessary, in the conditions above referred to.—*British Medical Journal.*

Treatment of Colitis.—Guion (*Rev. Mens. des Mal. de l'Enf.*, 1898, pp. 113, 243) distinguishes three main varieties of colitis in children —acute simple, dysenteriform and chronic. In the first variety, which occurs usually in hot weather, the attack comes on with fever, vomiting and diarrhœa of watery fæcal stools. The characteristic symptoms become quickly established—colic accompanied by tenesmus, and the passage at frequent intervals of small stools which have an offensive odor, and consist entirely or in large part of mucus streaked with blood. In severe cases the pain may be so great that the preliminary purgative indicated as a general rule can not be used. Hot compresses should be kept constantly applied to the belly; a warm bath may be given twice in the day and a single enema containing opium; by the mouth antipyrine, and if this fails to give relief chloral should be given. Milk and all solid food should be withdrawn, and the child given only broths and thin gruels, or "albuminous barley water," made by beating the white of an egg in barley water. As soon as the acute symptoms have subsided, small rectal injections of warm solutions containing common salt (gr. ij–℥j) or sodium biborate (gr. j–℥j) should be given. Antiseptic drugs are contra-indicated, owing to their irritating qualities. In the dysenteriform the fever is higher, the colic more severe, and there is marked tenderness over the colon, accompanied by contraction of the abdominal muscles. The stools consist of mucus mingled with blood; in some cases so intimately as to resemble pneumonic sputum. In cases of this type ipecacuanha is the best remedy, given in small doses every two hours with a little opium. If after three or four days the stools have not become fæcal, a copious injection of warm solution of silver nitrate (gr. ij–Oj) should be given. If symptoms of collapse ensue, subcutaneous injections of artificial serum (physiological salt solution) should be given. As much as a pint may be injected in this way in the course of twenty-four hours. In the chronic form the regulation of the diet is the most important point, and it may be necessary altogether to withdraw milk for some time. Particular attention should be given to guarding against constipation, which is very apt to ensue, and to lead to a fresh attack of colitis, determined by the irritation caused by the retained fæces. Of drugs calomel in minute doses, and a simple mixture of hydrochloric acid are the most generally useful. Hot baths and hot compresses to the belly night and morning are also useful.—*British Medical Journal.*

Children and Sleep.—Dr. H. Gillet (*Annales de la Policlinique de Paris*, June) says on this subject: The need of sleep in infancy varies

with the age of the subject. At birth, and during the early months, the nursling sleeps and suckles only. At the end of the first month it begins to remain awake for short periods, gradually increasing in duration. Up to three years or thereabouts the custom of a daily siesta after going out should be maintained. Up to ten or twelve years the hours of sleep exceed the waking hours. The sleeping time necessarily decreases as the age advances, according to Bergeron and d'Heilly, in the following ratio: Up to seven years, from ten to ten and a-half hours; ten years, from nine and a-half to ten hours; twelve years, nine hours; fourteen years, eight and a-half hours. After that age the division of the day into three eight-hour periods becomes good. The midday siesta, except in southern countries, is no longer to be allowed. Whatever theory of sleep is held, it is none the less incumbent on the hygienist to see that the organism has an imperative physiological need of this repair of forces. Observation shows us the duration, the hygienist prescribes the measures necessary to insure this sleep. The infant, even when very young, should be habituated to sleep at night naturally. To rock and to sing to it are evil measures. Rocking children must be prohibited as conveying to the brain a vibration which is not without danger. Singing is at least inconvenient, if it does not render every one the child's slave. Care must be taken to prevent the contracting of other bad habits also, such as sucking something, etc. To insure sleep to the child the following rules should be observed: 1. The child should always be put to bed at the same hour. 2. Relative quiet and darkness are requisite in the child's room; relative only, since it is necessary that the child should sleep in spite of the presence of other people who are not making much noise. A strong light should not be allowed to fall directly upon the face of the child. 3. The temperature of the room should be moderate, since excess of either heat or cold is hurtful, though less so if the child is well protected. 4. Aeration should not be inconveniently confined—there must be no curtains shutting off the air. 5. Waking should take place at nearly the same hour, or at least the child should not be so aroused as to cause any great variation from its habitual time of repose. The sleep of young children should not be cut short under any pretext whatever until it has over reached the usual time; but it is often requisite to allow an overplus of sleep demanded in consequence of growth. Sleep and proper nourishment are the best repairers of overfatigue, but this must not be allowed to induce a slothful habit, for excess of sleep retards general nutrition.

One other point in Dr. Gillet's article deserves notice, and that is his commendation of the English custom of setting aside in the house of an apartment or "nursery" for the children. It is not good either for grown-up people, or for the children themselves, that the latter should be "all over the house" or that they should spend too much time in association with grown-up folks.—*New York Medical Journal.*

The Therapeutic Use of Hot Air.—Dr. Mendelssohn (Berlin) says that the treatment of chronic arthritis is almost exclusively a question of temperature, and that the most efficacious method is the application of hot dry air, which allows a high temperature to be maintained for as long a time as may be required and does not produce any undesirable symptoms. Dr. Mendelssohn, following the example of English physicians, has made use of hot dry air, and has proved that temperature of from 120° to 140° C. (from 248° to 284° F.) could be borne by patients for several hours. The subjective sensations were not disagreeable, and no unfavorable consequences were produced on either the pulse or the temperature. The immediate local effect on the joints was at once very obvious, especially in chronic rheumatism, gout, and other affections of the joints. Sometimes after the first application of the hot air they became temporarily more movable, but of course to obtain a substantial improvement the treatment must be applied for a longer time.—*The Lancet.*

A Practical Ice Dish.—Dr. Lester Keller (*Medical Council*, June) thus describes a practical dish for keeping crushed ice:

Take an ordinary unglazed, porous flower-pot that will hold two quarts or more, a quarter of a square yard of white flannel, a strong string, and a flat-bottomed dish, and you are ready.

Spread the flannel out over the top of the pot, then push the flannel down in the center so as to make it funnel-shaped, but do not let the flannel go clear to the bottom of the pot. Tie your string around the flannel and pot near the top, set your pot in the dish, and there you are.

Put your ice between two layers of stout cloth, lay it on a solid surface, and pound it with the side of your hatchet until it is well crushed. Put your crushed ice in the funnel of flannel and you will be delighted to find that you can dip up a spoonful of ice without water. You will be surprised to find that in the hottest weather your supply of ice has lasted all night. The ice dish makes a very convenient place to put a glass of milk to keep it cool, if need be.

Enteritis of Children.—In enteritis of children after the bowels have been thoroughly washed prescribe the following:

℞.	Bismuthi subcarbonas,	ʒj–ʒij.
	Spir. myristicæ,	♏ xx.
	Spir. vini gallici,	ʒiij.
	Listerine,	ʒss.
	Mistura cretæ,	ad ʒij. M.
S.	One drachm every three hours until relieved.	

or the following:

℞.	Bismuthi subnit.,	ʒj.
	Syr. rhei,	ʒij.
	Listerine,	ʒvj.
	Mistura cretæ,	ʒj. M.
S.	A teaspoonful every three hours to a child a year old.	

If the child is suffering from pain which cannot be relieved by external applications, small doses of some preparation of opium may be used, preferably the camphorated tincture.

If the child is simply irritable, restless and peevish, fluid extract of hyoscyamus and spirits of chloroform in small doses given in glycerine will produce quiet and rest.—*Codex Medicus.*

The Abuse of Strychnine as a Stimulant.—The papers which have been published in the medical journals during the last few years emphasizing the value of strychnine as a cardiac and respiratory stimulant have been so numerous that many members of the medical profession are wont to regard it as being one of the best remedies which can be utilized to combat failure of either one of these vital functions. While we are thoroughly in accord with the view that strychnine is a powerful stimulant to these functions, we distinctly disagree with the habit which many practitioners have fallen into of employing this drug day after day for considerable periods of time for the purpose of stimulating the heart. Cases are frequently seen by us in which a physician has administered a dose of strychnine for a day or two with the result that there has been marked improvement in the symptoms. This improvement has then ceased to exist; and on the principle that the patient needed a larger dose a larger quantity has been given, until at the end of several weeks the patient has been taking quantities of this nervous stimulant and irritant which at the beginning would have been quite impossible.

As its use is continued, however, the improvement in the symptoms which first took place fails to be maintained, and finally, notwithstanding any dose that can be given, no relief is obtained from its use. In addition to the primary symptoms there is added a condition of excessive nervous irritability which in some patients is not only disagreeable but actually alarming, at least to the patient who has submitted to it, if not to the physician. Particularly is this true where very large doses of strychnine are administered to patients suffering from severe asthenic maladies, as for example in typhoid fever, tuberculosis, or epidemic influenza. In each and every one of these diseases a few doses of nux vomica or strychnine will frequently produce a noticeable improvement in the pulse and in the apparent condition of the nervous system, because strychnine being a powerful stimulant whips up the flagging nervous centers and causes them for the time being to perform their functions with greater activity. If the strychnine is persisted in, and ascending doses are given for a considerable period of time, in addition to the nervous symptoms which we have mentioned there is frequently developed an irritant fever, and particularly is this the case when strychnine is given in full doses during the later stages of typhoid fever or during convalescence from this disease, when, as is well known, anything which disturbs the nervous centers is very apt to result in a rise of temperature. Physicians are wont to watch the patient taking

large doses of strychnine in order that this dose may be cut down as soon as twitching of muscles of the forearms or slight stiffness at the nape of the neck is developed, but in our experience, in asthenic patients, long before these symptoms appear there develops mental disquietude and a condition of what might be called "explosive nervousness," which is most unfortunate. This condition we have already called attention to under the name of "strychnine delirium" in *The Therapeutic Gazette.*

Only recently we have seen several cases which emphasize these points. One was a patient suffering from typhoid fever who did not seem to take and use alcohol very well, although it was evident that his circulation required some stimulation. Strychnine was given to him in moderately large dose, with the result that for a day or two his circulation was improved, but at the end of that time the poor circulation returned and the patient began having evening rises of temperature of a considerable degree, which induced the physician in attendance to go back to the pure milk diet which had been previously rigorously enforced. As soon as the strychnine was taken away the fever ceased and it became evident that there was no reason for modifying the patient's diet. In another instance a patient suffering from the depression of influenza during convalescence, received large ascending doses of tincture of nux vomica and became, as he expressed it, "wild with nervousness." In a third instance a student of medicine suffering from asthenopia was ordered, by a well-known ophthalmologist, ascending doses of nux vomica, which he took for a period of three weeks, at the end of which time he was taking thirty drops of the tincture three times a day. When he presented himself for treatment he complained of excessive nervousness, as he expressed it, "fearful thoughts," and suffered continually from a sensation that if he was not in a condition of activity something evil would happen to him. These symptoms were entirely removed by stopping the nux vomica and by directing the patient for a few days to take more than his usual quantity of outdoor exercise.

Strychnine or nux vomica is undoubtedly a remedy possessing great powers of stimulation, but we believe that its use should be limited to those cases in which we desire to call upon the nervous system for a sudden effort, as in meeting a crisis in a case of collapse or syncope. It is the lash of the whip which applied violently to a horse about to become "mired" may sting him into such an excess of activity that he raises himself from the quicksand in which he is sinking. So in medicine strychnine may be regarded as a valuable remedy to meet an emergency, but there is nothing which indicates that its continual use as a nervous or circulatory stimulant is wise, and there is much which indicates that such use of it is unwise.

Whatever influence strychnine may exercise upon the circulation is in reality due to its effect upon the nervous system, as it is not a direct cardiac stimulant of any considerable power.

In the discussion of a paper upon diphtheria, which recently took place

in New York, Dr. Winters asserted that in cases of cardiac disturbance in diphtheria he had found that strychnine was practically useless, and he stated that Dr. Welch, of Philadelphia, entertained the same views. Personally, we agree with these gentlemen to the extent indicated by the previous remarks, but in sudden cardiac failure we believe that strychnine is the remedy which affords more hope of relief than any other which we can employ, although, as is well known, sudden cardiac failure in the course of diphtheria is one of the most fatal accidents which we have to combat.—*The Therapeutic Gazette.*

Cold Sponging versus Cold Bath.—Dr. H. A. Hare (*Therapeutic Gazette*, March 15) affirms that he has used cold sponging in his hospital practice and rarely the bath, with the most satisfactory results. He suggests the following rules of treatment: 1. In early typhoid, with constipation or moderate diarrhœa, give a full dose of calomel in divided doses, in order to stimulate the liver and antisepticize the bowel with bile. 2. Control the fever when it reaches 102° F. by sponging. The patient being stripped and laid on a rubber sheet or blanket over a sheet, he is to be sponged with water adapted in its temperature to his needs, and it is to be remembered that the rapid application of a low temperature is more refreshing than the prolonged application of a higher temperature (Baruch). The chief advantage of the cold sponge lies in the shock and reaction. This is better obtained by the use of ice sponging than by the bath. The patient's surface is always bright red in ice sponging, often blue in the bath, and that the fever is not the chief danger in the case renders the fact that as great a reduction from the sponge is not reached as from the bath of little importance except in hyperpyrexia. Shattuck tells us that he has found no marked or constant difference in the antipyretic value of cold sponging at 60° F. for twenty minutes, the cold pack at 60° F. for sixty minutes, or the cold bath at 70° F. for ten or fifteen minutes. Finally, if this does not bring the temperature down to 100.5° or 101° F. in twenty minutes, resort should be had to the tub.

It is essential when the sponging is used that more water be applied to the back than to the trunk of the body, for at the back the great muscles and thick skin retain the heat as a reservoir, and are not cooled if only the front of the body is sponged. Further, the posterior surfaces are the ones apt to be congested and sore, from the dorsal decubitus, and therefore need the stimulating effect of the bath, as do the kidneys and other deeply situated organs. That this treatment is of value is shown by the marked redness of the skin, the improvement of the circulation and respiration, and the cleared mind. 3. It is advisable not only to use friction in a light form, but to use moderately active massage, with the same objects in view as when the rest cure is undertaken, for the proper treatment of typhoid is a modified rest cure. The writer is firmly convinced that by this means bedsores, local congestions and effusions, œdematous swellings, peripheral

nerve pains, and muscular feebleness will be largely decreased, and Pospischal has shown that mechanical irritation of the skin is capable of increasing heat loss 95 per cent. 4. In nearly all cases give more nourishment than the average typhoid patient in the past has usually had. With the exception of broths and meats, almost any article easy of digestion should be allowed—as one or two or more lightly boiled eggs, cornstarch, arrowroot, etc. 5. Use stimulants in carefully graduated doses whenever the circulation needs them, particularly alcohol. Even the cold-bath enthusiasts give whisky to overcome the depression they often produce.

On the Treatment of Some of the More Common Eye Affections. —In the *Edinburgh Medical Journal* for January, 1898, Mr. Berry gives the following information as to some of the common eye affections:

A condition that one is frequently called upon to treat is hyperemia or inflammation of the lid margin. The inflammation, blepharitis, is met with in very varying degrees of severity, and leads to more or less marked ulceration of the free margin of the lid, as well as sometimes of the contiguous skin. Different cases of blepharitis are often classified according to differences in the local pathological changes. From the point of view of treatment it seems better to recognize, as far as possible, the main differences in etiology. A sufficiently useful etiological classification might embrace three groups, which, however, can hardly be said to be always absolutely distinct.

One of these groups includes the cases of blepharitis which occur for the most part in delicate children, and are often associated at times with attacks of phlyctenular inflammation of the conjunctiva and cornea. Some reference has already been made to these cases. They are cases of what may be called the strumous form of blepharitis. Another group includes the cases which are more or less evidently connected with a chronic catarrhal condition of the tear sac. The last group again comprises those of herpetic or eczematous blepharitis, as the third variety has sometimes been called. In these there is an absence of the strumous element, and usually, at the same time, of any evidence of auto-infection from local sources. They mostly occur in adults, and are often associated with more general eczema of the skin of the lids.

The worst cases of blepharitis belong to the first two groups. The inflammation in them often goes the length of ulceration, and this ulceration leads to greater or less destruction of the eyelashes. In old-standing cases it is common, indeed, to find a complete or practically complete absence of eyelashes. This gives rise to an ugly, red, blear-eyed appearance, which is very characteristic. Short of this there may be an alteration in the color and character of the lashes, many of those remaining being misdirected, and thus leading sometimes by their inversion to irritation or ulceration of the cornea. The ulcers of the lid margin, as they extend in depth, partially

or completely destroy the hair follicles, and then cause these changes in, or the loss of, the eyelashes.

In the treatment of all cases of blepharitis, the first step should be to remove the crusts or scabs which have formed, and to epilate, with the cilia forceps, all the eyelashes which present a distinctly abnormal appearance in their color, their thickness, or the direction of their growth. The subsequent treatment must depend upon the etiology of the local inflammation, as well as to some extent upon the severity of the changes which have been produced. Sometimes, when the ulcers of the lid margin have become to a great extent confluent, a really satisfactory clearing of the soil for local applications can only be got by first cutting all the lashes off with a pair of scissors. This is comparatively seldom necessary, however. Before attempting to remove the scabs, it is best, in the more pronouncedly impetiginous cases, to apply a starch poultice, in order to soften them. They can afterwards be carefully and thoroughly picked off with a piece of quill, without causing much pain. Until this is done, any epilation that may be required should not be begun. Besides saving trouble, owing to many of the diseased lashes coming away with the scabs, it is then easier to see from the little ulcer pits which lashes it is advisable to pull out. When from the raw surface thus exposed there is found to be an exudation in which there is an evident admixture of pus, which is only rarely the case, and only in the strumous variety of blepharitis, it is well to paint the lid margin over once with a five per cent. solution of nitrate of silver, dabbing the solution well into the ulcers with the camel's-hair brush. This should be followed up by the use, three or four times daily and for a quarter of an hour or so at a time, of compresses soaked in a one-half per cent. solution of the neutral subacetate of lead. After these have been used for a few days, recourse may be had to the yellow oxide ointment. When the blepharitis is associated with phlyctenular conjunctivitis or keratitis, it is best to use the mercurial precipitate, according to the prescription already given. If it exists alone, the following preparation may be used instead:

℞. Hydrargyri oxidi flavi, gr. x.
Vaselini albi, ʒss.

This should be well smeared along the lid margin morning and night.

Occasionally from neglect, or owing to some particularly marked delicacy on the part of the patient, often from both combined, and always in young children, the lid margin inflammation is not only ulcerative, but is associated with a great deal of deep infiltration, so that the tissues of the lid, and especially the tarsus, are much swollen and thickened. In such cases the ordinary treatment is of no use. As the eyelash follicles are then irretrievably destroyed, and there is consequently no use attempting to save them, the best treatment is to freely scrape away the ulcerated tissues with a small Volkmann spoon, and then undermine the skin and transplant it over the comparatively healthy raw surface which is left.

The general treatment in the case of the strumous variety of blepharitis should be on the same lines as that already discussed in connection with phlyctenular keratitis. Dark glasses should be worn outside in summer, and also in winter when there is snow on the ground. The skin should be kept clean by frequent baths, and cod-liver oil or syrup of the iodide of iron given internally.

In a number of cases of less severe blepharitis, which do not rapidly improve by the use of the yellow oxide ointment, efficiently applied after the scabs and crusts and diseased eyelashes have been removed, it becomes advisable to slit up the canaliculi. This should always be done, as already explained, when any regurgitation of mucus or muco-pus can be got by pressure over the tear sac. But whether such regurgitation be found or not, the little operation is indicated wherever a blepharitis exists for a long time on one side alone. In such a case it often happens that the blepharitis rapidly disappears without any further treatment, although it may previously have resisted other therapeutic measures. There is not, however, the same justification for early interference of this kind in bilateral cases. In them it should not be undertaken, unless there should either be definite evidence of a catarrhal state of the mucous membrane of the tear passages, or a decided rebelliousness to the treatment recommended above.

The eczematous variety of blepharitis, besides being practically only met with in adults, never assumes the impetiginous type which characterizes so many cases in strumous children. Hyperemia of the lid border with a scaly crusting, and sometimes a sort of herpetic eruption, are the appearances presented by this form. In the milder degrees the lid margin has a look almost as if it had been dusted over with flour, although the numerous small scales are hardly as white.

The treatment should consist in frequent bathing with warm water, the lid margins being well rubbed with a wet pledget of cotton-wool. A little zinc ointment may also be smeared on in the morning after the bathing. The following ointment may be used:

℞.	Zinci oxidi,	gr. viij.
	Vaselini albi,	ʒss.

Or, the crusts may first be rubbed off with the cotton-wool soaked in a little spirits and water (about one part of whiskey to three of water), and then the following ointment rubbed in:

℞.	Ichthyoli,	♏ij.
	Aquæ destillatæ,	f ʒss.
	Lanolini,	ʒss.

Attention should be paid to the conditions under which the eyes are used, and sources of irritation, such as dust or smoke or impure air, as far as possible removed. Dark glasses are also sometimes useful. Further, it is always advisable to correct any existing error of refraction, especially for near work. In troublesome cases it is well to recommend an anti-gouty

diet. It is especially important to knock off alcohol, especially if, as is often the case, it happens to be more freely indulged in than necessary.

A condition which is often complained of, and generally more on account of its unsightliness than for any great discomfort to which it gives rise, is a sort of blind pimple of the lid margin. Usually there is only one, though occasionally there may be several, elevations of this kind at different parts of the margin. The pimple appears as a uniformly red conical elevation. Its base occupies mostly the portion of the flattened lid margin which is in the neighborhood of its free outer edge. Often there are epithelial squames at other parts, indicating a slight degree of blepharitis, but this association may be quite absent. These pimples occur mostly in adults, and often in cases which present more or less evident arthritic symptoms.

The question of treatment has most often to be considered in the case of ladies, who are often sensitive as to the disfigurement which the condition causes. No doubt there may be some degree of local discomfort as well. The actual disfigurement depends partly upon the size, of course, but mainly on the degree of congestion which the little prominences present. The natural duration of the pimples is variable. They may only last a few weeks, but often remain in much the same state for many months. Usually, however, in the chronic cases, the redness, which at first is marked, tones down to a great extent, so that the adventitious tissue assumes nearly, if not quite, the color of the rest of the lid margin, and consequently becomes much less apparent. On everting the lid there is always found to be a little circumscribed area of hyperemia of the conjunctiva, roughly triangular in shape, with its base directed to the portion of the lid margin on which the pimple has formed. In chronic cases there is always to be seen a yellowish streak coursing down the middle of the hypermic patch. This is simply a Meibomian duct blocked with secretion which has become more or less calcareous. Even in recent cases it is usual to find a degree of transparentness in the middle of the congested conjunctival area, behind which some whitish secretion in the duct shows itself.

The treatment consists in emptying out this retained secretion. This can be done at first by simply pressing the affected portion of the lid between the two thumb nails, which causes the natural exit at the lid margin to burst open and give escape to a sebaceous-looking secretion. In cases which have lasted for some time it is necessary to incise from the conjunctival surface, making the cut along the yellow streak referred to, and up to the base of the pimple, and then to press out the contents. The pimple itself in either case then quickly disappears. In recent cases it almost immediately loses its hyperemia, and this of itself is always a cause of satisfaction to a patient who has been mainly annoyed by the unsightliness which it has produced. Not infrequently there are found to be other little patches in the lid of the same nature, though rarely as large, but

which are not complicated by the protrusion at the margin. These should be treated in the same way, and preferably at the same sitting. An astringent lotion may be used for some time afterwards.—*Therapeutic Gazette.*

Pruritus Ani.—In an elaborate article on the treatment of pruritus, Dr. Jose Codina Castelvi (*Gaceta Medica Catalana*), recommends the following in pruritus ani. Carbolic acid should be administered in doses of from 5 to 50 ctg. (.75–1.5 gr.) per day, in pill form, in conjunction with valerianate, as in the following formula:

℞. Carbolic acid, gme. .05.
Extract of valerian, gme. .10.
Powdered valerian, gme. .20. M.
To make one pill.

All excesses should be avoided, and horseback and bicycle riding must be prohibited. The bowels must be regulated, and before each defecation the anus and its margins are to be smeared with vaseline. The pruritic region should be washed, on arising in the morning and on retiring, with an infusion of cocoa leaves, which should be used as hot as can be borne. To this infusion one can add a glycerine solution of carbolic acid, so that the latter will exist in the mixture in the proportion of 1 or 1½ per cent. Every third day the parts affected must be touched with a solution of nitrate of silver, 5 per cent.

After each movement of the bowels the region is to be washed with cotton soaked in the above solution, and after being cleansed the parts are dusted with a powder composed of talcum and zinc oxide. To calm the acute crisis, a suppository composed of the following may be inserted:

℞. Cocaine hydrochlorate,
Morphine, āā gme. .02–.05.
Cocoa-butter, q. s.

—*Massachusetts Medical Journal.*

To Relieve Neuralgia of Phthisical Patients.—Capitan prescribes the following ointment. A very small quantity is lightly applied, and the part covered with some impermeable material and absorbent cotton. The application must be discontinued as soon as the skin becomes even slightly reddened:

℞. Guaiacol,
Methyl salicylatis, āā gr. lxxx.
Ext. belladonnæ, gr. iijss.
Ext. opii, gr. iv.
Vaseline,
Lanoline, āā ʒss. M.
S. External use.

In very acute cases, menthol (15 grains), antipyrine (30 to 45 grains), or bromide of potassium (80 grains) may be added.—*Medical News.*

INTERNATIONAL MEDICAL MAGAZINE.

An Illustrated Monthly of Medical and Surgical Science.

Edited by

WALTER L. PYLE, A.M., M.D.

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Burial-Insurance.

Children over a year old, wives, aged parents, all whose burial expenses can not be met out of the scanty earnings of the bread-winner, are insured nowadays among the poorer classes. Is the business legitimate? Are there many instances of lives made way with for the burial money? The British Parliament, way back in the forties, investigated this matter in the shape of "Burial Clubs" as it existed at that day. Then there were no immense companies, with palatial homes, in the business. The report—read many years ago—if we remember it aright, revealed a remarkable mortality among the insured, and a general condition of rottenness about the business, and for years afterward it was somewhat repressed by legislation. But in the present outgrowth among us there is reason to think better of it. It has its good, its human side, and paternal and maternal instincts are still existent, civilization and pauperism have not extinguished them. Just as the law now holds that after a certain time suicide does not vitiate a life-insurance policy, since no one insures with a view to a far-distant suicide, so we may believe that few insure dependent relatives and young children, anticipating their subsequent death from their own neglect or crime. Sometimes, alas! so often, all there is eventful in life is its beginning and ending. The only mark it leaves behind is on the tombstone. Through its few months or years there has been no heroism, no achievement, no notability, no success. And shall we let the poor mortal go off life's stage in utter silence, into utter oblivion? So pitiful is this thought, that even the poor, ignorant and degraded, in their colorless lives of toil, wish to

catch, if for a moment, the eye of their world. Strike once, even if in dying, to the heart of the stranger; cut one notch in the smooth calendar that marks their uneventful days. Hence burial-insurance. It pays for the simple coffin, for the woeful garb of the mourners, for the crape that flutters at the bell-pull, for the hearse, the line, long or short, of vehicles in which their friends enjoy an outing, and see green fields at the expense of the dead. Cremation, when it becomes popular, will lend itself readily to this human instinct. While the more cultered will be content to let their dead burn slowly and unostentatiously, the demand of the populace for notoriety in death may lead to the introduction of spectacular cremation at cheap rates. The fires will glow with colored flame and burst into pyrotechnic mottoes laudatory of the virtues of the departed. All the old obituary "*Ledger* poetry" of a generation ago will be revamped and set to gunpowder; the graphophone will recite the last words or wails of the deceased and the doctor and relatives, and the ceremony conclude with one glorified lurid flash of "Gone but not forgotten." This will sweep away much of the cost of death, and insurance may be less expensive. With the disappearance of the tinsil and mortuary trappings will go the tombstone and the cemetery lot, and the light and simple yet classic urn will take their place, in which the ashes may rest and be forgotten, just as readily as under the slab that weighed so heavily on the pockets of the survivors.

The Doom of the Druggist.

The druggist is doomed! That well-known individual, who has masqueraded so long under the cognomens of apothecary, pharmacist, pharmacien, and druggist, is on the road to being no more. He feels it in his bones. His own literary journal tells him so in a doleful editorial, and it is hoped he will take his doom like a man. For many years he has been counter-prescribing, giving advice and medicine in a back office, selling patent medicines and secret preparations, criticising the prescriptions of his neighboring practitioners, and substituting with a free hand when his stock of drugs was low. Shall we mourn him? Individually, yes; we will miss his convenient soda-water fountain, which vitiated our appetite, while it cooled our brow, his convenient cigar and his genial smile. Perhaps, however, the laugh may remain like the fading Cheshire cat, whose grin was eternal. Well, we are all doomed! Triturates may be the means—it is somewhat comical to be overthrown by such little things, but anyway our turn will come. First we divided, and specialists knocked out the time-honored family-doctor. Then hospitals grew mighty and began to overwhelm and consume the specialists with charity-work. Then State medicine and hygiene took a hand, and the remnant—the saving remnant who *would* get

sick and *would* pay their bills—became healthy, and needed no physician, and "so"—to antedate time—they will say in the books of the future, "so the good old profession of medicine faded from the earth." When a thing is crushed out and stamped to pieces, it is poetically described always as "fading." After that, if any one wants to die, only two courses will be open —old age and suicide. They will long for us yet in the twentieth century.

BOOK-REVIEWS.

BRIEF ESSAYS ON ORTHOPEDIC SURGERY: Newton M. Shaffer, M.D. 1898. D. Appleton & Co., New York.

This very readable little book is a collection of articles and addresses written or delivered between 1884 and 1897, and dealing mainly with the still unsettled question of the scope of orthopedic surgery. While this branch of surgery has made wonderful strides since the days of Stromeyer and later of Davis, it has, as Dr. Shaffer points out, been hampered by the fact that the lines between it and general surgery have not been sharply drawn, many of the men calling themselves orthopedists continuing to practise general surgery when the opportunity offered itself. Dr. Shaffer believes that the orthopedist should confine himself as strictly to his specialty as does the ophthalmologist, that there should be no "overlapping" into general surgery, and that the orthopedist should not permit himself to be beguiled from the humble and laborious, but little exploited field of mechanico-therapy, to the crowded pastures of operative surgery, where mayhap the sun of fame shines somewhat more brilliantly. We agree with Dr. Shaffer that the future of orthopedic surgery depends largely on the settlement of this question, although hardly going so far as to say with him that only those operations come within the scope of orthopedic surgery, in the after treatment of which mechanical appliances are necessary, a rule which, as he points out, bars out most excisions and osteotomies from the domain of orthopedics. As Dr. Shaffer justly remarks, however, we are not lacking general surgeons who can carry out these procedures as well as the most skillful orthopedist, while the number of men trained in the special mechanical problems necessary for the conservative treatment of deformities is so small, and the field for research so large, that the orthopedist may well content himself with leaving such cases to his confrère, the general surgeon. And we may be sure that just as long as the orthopedic surgeon continues to practice general surgery, and to enter into active competition with the general surgeon, just so long will the latter gentleman (unless human nature changes) continue to send his brace cases to the instrument maker rather than to the orthopedist.

A MANUAL OF INSTRUCTION IN THE PRINCIPLES OF PROMPT AID TO THE INJURED. By Alvah H. Doty, M.D., Health Officer of the Port of New York. Second edition, revised and enlarged. New York, D. Appleton & Co. 1898.

This little emergency manual appears in new and revised form. A chapter on Hygiene has been introduced, with the hope that it will give to the reader a general idea of the methods by which the body may be kept in a healthy state. There is appended the recently adopted drill regulations for the Ambulance Corps of the U. S. Army. The book is well written and appropriately illus-

trated, and in its revised form will doubtless continue to enjoy its merited popularity.

MASTERS OF MEDICINE: SIR BENJAMIN COLLINS BRODIE. By Timothy Holmes, M.A., F.R.C.S. WILLIAM STOKES. By Sir William Stokes. New York, Longmans, Green & Co. 1898. Price, $1.25 each.

These two volumes are the most recent of the bibliographic series entitled "Masters of Medicine," which includes articles upon the lives of Hunter, Harvey, Simpson, Stokes, Brodie, Helmholtz, Vesalius, Sydenham and Bernard. Next to John Hunter, it is likely that Brodie has brought to bear more acute intellect to the study of surgery than any other Englishman. His life is of especial interest on account of his versatile knowledge, and varied career in many departments of learning. Mr. Holmes has given us a most readable bibliography. Sir William Stokes has contributed a most interesting and impartial story of the life of his illustrious father, William Stokes, President of the Royal Irish Academy.

A MANUAL OF MODERN SURGERY, GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D., Clinical Professor of Surgery, Jefferson Medical College, Philadelphia. 1898. W. B. Saunders, Philadelphia. Price, cloth, $4.00, *net.*

The second edition of this popular manual represents a very substantial volume of 900 pages, with 386 illustrations. The author's idea of making a book to stand between the text-book and compend, has been most successfully followed in the new edition. No change in the character or purpose of the manual has been made, although it has been practically rewritten, many new articles added, and a majority of old articles enlarged, restricted, or otherwise altered. Among the additions are sections upon Surgery of the Liver and Gall-Bladder, the Spleen, the Pancreas, the Female Breast, Wounds Inflicted by Modern Projectiles, Electrical Injuries, and the Use of Röntgen Rays.

ATLAS AND EPITOME OF OPERATIVE SURGERY. By Otto Zuckerkandl, of Vienna. Edited by J. Chalmers DaCosta, M.D., of Philadelphia. W. B. Saunders, Philadelphia. 1898. Price, $3.00, *net.*

As this work is primarily intended for students, those groups of operations whose practice upon the cadaver forms the basis of practical instruction are described in detail and illustrated in their most conspicuous aspects, while operations requiring special skill are described concisely. The atlas comprises 24 colored plates and 217 illustrations in black and white, together with appropriate descriptive text. The subjects are considered as follows: Division of the Tissues, Reunion of the Tissues, Operations on the Extremities, Operations on the Head and Neck, and Operations upon the Trunk and Pelvis. All the descriptions are terse and lucid, and the illustrations are excellent. The book is invaluable to the student of surgery.

ATLAS OF SYPHILIS AND THE VENEREAL DISEASES. By Professor Franz Mracek, of Vienna. Edited by L. Bolton Bangs, M.D., of New York. W. B. Saunders, Philadelphia. 1898. Price, $3.50, *net.*

This volume contains 71 colored plates, illustrating the most common manifestations of syphilis and other venereal diseases, together with a descriptive text and a brief treatise on the pathology and treatment of the affections pictured. The clinical material for the plates has been drawn chiefly from the wards in the K. K. Rudolfsspital, in Vienna. The coloring of the plates is beautiful and true to nature, and the selection of the subjects shows an abundance of common sense. Although the treatments given are somewhat different from those generally used in America, the book is of sufficient practical importance to be of great use to the general practitioner as well as the specialist.

MEDICAL NEWS AND MISCELLANY.

Dr. Louis E. Livingood, a medical attache of Johns Hopkins Hospital, perished in the dreadful calamity of La Bourgogne. Dr. Livingood had already made an enviable position among the younger men of his profession, and was on his way to Germany for a course of post-graduate study. He was a graduate of Princeton and the Medical Department of the University of Pennsylvania.

The Sixty-Sixth Annual Meeting of the British Medical Association.—The sixty-sixth annual meeting of the British Medical Association was held at Edinburgh on Tuesday, Wednesday, Thursday and Friday, July 26, 27, 28, 29, 1898.

The officers were: President, T. G. Roddick, M.D., professor of surgery in McGill University, Montreal; President-elect, Sir Thomas Grainger Stewart, M.D., LL.D., F.R.S.E., professor of practice of medicine and clinical medicine in the University of Edinburgh and physician in ordinary to Her Majesty the Queen of Scotland, Edinburgh; President of the Council, Robert Saundby, M.D., LL.D., F.R.C.P., professor of medicine in Mason University College and physician to the General Hospital, Birmingham; Treasurer, Charles Parsons, M.D., Dover.

An address in medicine was delivered by Thomas Richard Fraser, M.D., LL.D., F.R.S., professor of materia medica and clinical medicine in the University of Edinburgh. An address in surgery was delivered by Thomas Annandale, F.R.C.S.Edin., F.R.C.S.Eng., F.R.S.E., surgeon to the Edinburgh Royal Infirmary and regius professor of clinical surgery, University, Edinburgh. An address in psychological medicine was delivered by Sir John Batty Tuke, M.D., D.Sc., Pres.R.C.P.Edin., lecturer on insanity, School of Medicine of the Royal College, Edinburgh. The scientific business of the meeting was conducted in sixteen sections.

The Thirteenth International Medical Congress, Paris.—The next meeting of the International Medical Congress will take place in Paris during the year of the great exhibition in 1900—from August 2d to 9th. Professor Lannelongue, the well-known surgeon and a member of the Senate, has been chosen President, and Dr. Chauffard (21, Rue St. Guillaume) has been appointed Secretary-general. The committee of organization has already been at work for some months and considerable progress in the arrangements, which will be on a large scale, has been made. The President of the Republic has consented to open the Congress in person, and foreign countries are being invited to join in the work.

Curious Vengeance.—M. Montlahuc, Commissary of the Police, reports a curious case at Passy, a suburb of Paris. An abused wife avenged herself on a drunken husband by inflating his rectum with a pair of fire bellows. Alarmed by the heart-rending cries of her maudlin victim she sent for a physician. The doctor could think of no cause for such intense abdominal symptoms but caustic poison, and was about to report the case to the police authorities, when the guilty wife confessed.

A Would-be Suicide.—The following story well illustrates one cause of the prejudice against European physicians that prevails in China. The case was included in Dr. C. C. de Burgh Daly's report on the health of Newchwang. "A most determined attempt at suicide took place on board a British ship. A pantry boy, a native of Ningpo, aged twenty-three years, had a dispute with the steward, and, seizing a small table knife which was well worn down by frequent polishing on a knife board, he entered it on the left side of his throat, and, cutting backward and across, severed the trachea and œsophagus. When I saw him he was not much collapsed; very little bleeding had taken place. The wound was over two inches from side to side, and was very deep in the central line; the trachea, completely severed, was tilted and in a faulty position with relation to the entrance to the larynx. On attempts at drinking, the fluid came out through the wound or passed into the trachea, causing violent fits of coughing. For over sixty hours the patient absolutely refused to allow us to do anything for him, struggling violently and with great strength whenever I attempted to feed him. His one wish was to die quickly, and he implored me to bring about that result by cutting his throat to a greater extent. However, starvation reduced him to a better state of mind, and he expressed a desire to live and be cured. A soft-rubber tube was passed by the mouth every four hours and guided into the lower opening of the œsophagus by a finger in the wound. In spite of a sharp attack of bronchitis he made rapid progress toward recovery, and left here some weeks later on the advent of cold weather, with only a small opening into the trachea and œsophagus. He was given a tube and taught how to pass it for himself. In accounting for the wild and blood-curdling legends about the doings of foreign surgeons and others, which are so prevalent among the natives, it may be of interest to add that this youth, in order 'to save his face' in regard to mutilation of his body by his own hands, gave the following explanation of the occurrence to the comprador and other natives on board the steamer he travelled home in: 'When I arrived in Newchwang I was very ill, and the captain sent me to the foreign doctor, who was unable to cure me, and consequently he [the foreign doctor] cut my throat in order to let out the hot air.'"—*Medical Record.*

A Determined Suicide.—A man was arrested for poaching on fish preserves by means of dynamite cartridges. He decided to take his own

life by the same means. He placed the cartridge under his chin, but, the effect of dynamite explosions being most marked downward, the chief effect was to damage the hand which held the cartridge and the other hand to a less extent. He then lay down on the ground, placed a cartridge on his chest, and with great difficulty, owing to the injury to his hands, struck a match after many attempts, and applied it to the fuse. The thorax and abdomen were completely emptied of their contents, and the corresponding parts of the vertebral column and ribs were also missing. The other parts of the body were not injured.—*Medical Press and Circular.*

English as She is Advertised.—Under this heading, *The British Medical Journal* gives some amusing specimens of English as written by Continental advertisers. The specimens are also instructive, in that they furnish striking examples of the impossibility of writing a language idiomatically without a thorough knowledge of it. The perusal of these sentences may perhaps induce some American or Englishman who has thought of writing his own foreign advertisements in home-made French or German, to obtain the services of some one "to the manner born." Says *The Journal*:

"It is apparently a common delusion, especially prevalent perhaps in Germany, that it is only necessary to arm oneself with a dictionary in order to be able to write English. The result is not infrequently amusing. Thus, it is distinctly odd to be told of the waters of one spring that 'It stirs the dermal functions,' 'is an excellent reconstitutive of animal economy,' and has a beneficial effect on the 'oculary apparel.' Further, we are told, 'We must also to point out their salutary action in rickets, especially for children,' which seems to suggest that the writer is as far to seek in medicine as he is in English. As to the mode of action of these waters, we are assured, 'It is by altering the diathesical hereditary or acquired tendencies of people, or the organopathic state which can keep alive dermal lesions, that it cures these with an unexceptional quickness.' This may be very true, but it is a little difficult to know what it means. An inventor who has a curious 'fresh-air respirator for the use of indoor patients,' in the course of some didactic observations on the advantages of fresh air observes: 'Only compare the chub-cheeked country lad (living in fresh open air, who in spite of scanty food is abounding in health) with the pale-cheeked child of towns, better fed, and secured indoors against the brazing air, and you will immediately perceive the different effects produced by fresh air on both beings.' Another advertiser, who has antiseptic capsules to sell, observes of the 'creosote of commerce' that 'owing to relentless competency' it may be had at a very low price; and the same person, in discussing the specific treatment of tuberculosis, observes that 'in this run after a bacillicid medication countless were the failures.' After this it is not surprising to be told that the preparation for sale 'is a medicament which has not its analagous in trade.' Another advertiser has 'A New

Compound, Eutrophical Martial and Nevrosthenic.' Moreover, it contains an ingredient, which 'is an invaluable agent against deperdition of the tissues.' This preparation is so nicely put up, we are told, that the majority of patients 'enjoy it as they would a "goody."' Another firm, also a French one, have two preparations 'which have enlarged the knowledge of therapeutic, those last years, found such a success amidst French medical men that we thought well to have them brought before the valuable appraising of English medical men. Most scientifically prepared, they are unknown in the public, according to what, we hope, Doctor, you will do us the favor to ask for samples in order to experiment their numerous qualities through your medical practice.'"—*Literary Digest.*

Student Duelling and the Psychology of Sport.—A recent bit of university news from Tübingen in Würtemburg is, that during a *mensur* (a student's duel) there, one of the duellists-for-fun was struck so severely just above the orbit with the duelling *schläger*—we can scarcely translate it *foil*—that the eye was forced from its socket. This is the second serious accident during the present semester. In the other case, at one of the smaller universities in the southern part of Germany also, a surgical complication after a duelling wound caused a fatal issue. Erysipelas set in in a scalp wound, and the streptococci were carried by emissary veins to the interior of the skull and set up meningitis which terminated fatally.

The so-called sport would bear interesting comparison with our own football, where fatal accidents are not all too rare. The two would seem to suggest the principle in the psychology of sport, that, for that middle term between boyhood and manhood, interest in sport is almost inevitably bound up with an element of danger. I am sorry to say that university men's sisters here seem to be quite as proud of a brother's prowess in *mensur* as American girls are of their own and other people's brothers' success on the football field; which will have to go down as another psychological paradox, I suppose.

The hideous scars the sport leaves might, one would think, at least deter the sex from interest in it; but it does not. Very few German students are without them; very few German professors but carry traces of the sport of twenty-five to fifty years before. When Macaulay's New Zealander has grown tired of standing on the broken arches of London bridge, sketching the ruins of St. Paul's, and goes home to study, from the remains found in the ruins of the British Museum, the details of university life in our day, one cannot help but think that the scarred faces of German University students, the representatives of the greatest university life of our day, will prove a mystery to him. With a true commentator's spirit, however, he will have to have a theory, and it will, I suppose, read something like this:

"As university education became more generalized, there had to be some ready way of distinguishing university from non-university men; and

so on entrance to the university, the students inflicted on the left side of their faces deep wounds which were not allowed to heal by primary intention (for it must be remembered that it was just at this time that Lister initiated the first great scientific advance in the treatment of wounds), but which were irritated so as to leave a scar. The number, depth and ugliness of these scars, then, showed the student's earnestness of purpose and his devotion to science and education."

The explanation will be no farther fetched than the lucubrations of many a scholiast of our day. The fact of the matter is, that, paradoxical as it may seem, the easiest way to tell a German university man is by looking for traces of scars on his head and cheek.

Here, of course, duelling is forbidden by the police and university authorities; but there is no serious effort made to stop the practice, and towards the beginning and end of each semester young university men strut proudly on the principal streets or drive around ostentatiously in open carriages with their heads and cheeks bebandaged and beplastered. Some of the medical men have taken a decided stand against the practice, but this avails little, as society generally and the kaiser are sympathetically inclined to tolerate—one would almost say, encourage—the sport. One hears a good deal of a spirit of manliness that it engenders, of personal courage, of the lesson of not minding a little knock or two or the flow of a little blood, of learning to keep one's temper under trying circumstances, that sounds wonderfully familiar to an American who has heard people talk who held a brief in the football case.

Of course, I would not think for a moment of comparing this brutal indoor sport, that has none of the claims of our great outdoor game in its favor, with football. (May I say that no German would either, because he considers football beneath notice, a matter of fisticuffs and brute strength.) I have thought that a bringing them together under a psychological aspect might make it clearer how a false university spirit may conceal the brutality of something that is at once evident to disinterested outsiders.—Berlin correspondent to the *Boston Medical and Surgical Journal.*

The Role of the Surgeon in Duels.—Dr. Devillers, "whose great experience in the matter of duels is well known" (*Nouveau Montpellier médical*, April 30), gives his practical advice on this subject in *Médecine moderne*, which it may be a matter of interest, if not of practical utility, to note here. Dr. Devillers insists first of all on the duel taking place in some inhabited locality, so that the wounded man may be transported to where he can be properly cared for. He takes as little as possible with him, carrying everything in the case of his Paquelin cautery, which he empties of its contents, except the alcohol lamp. Here is his armamentarium; 1. Two eight-meter bandages. 2. Iodoform or salol gauze. 3. Some antiseptic powder, traumatol, iodoform or salol. 4. A bottle containing two hundred grams of Van Swieten's solution. 5. A small bot-

tle of collodion. In his pockets he carries his pocket-case, which contains in addition to the usual instruments a Reverdin's needle, some silver wire, and hæmostatic forceps. 7. A small packet of absorbent cotton. 8. A Pravaz syringe with some morphine solution in case of wound of the abdomen, to lessen pain and immobilize the intestine. It is customary, we learn, to call for the physician, "as for a wedding," in a landau. His proper place in the vehicle is a subject depending upon the age, etc., of the seconds. While the seconds are arranging the details the surgeon exchanges courtesies with his confrère, and they promise mutual aid. In the event of swords being chosen, each surgeon ought to take possession of the pair of swords brought by his principal, and render them aseptic. There are two methods of doing this: The first consists in passing the blade for an extent of from twenty-five to thirty centimeters through the flame of a spirit lamp; the second consists in rubbing the blade with cotton saturated in the antiseptic solution which has been brought. This procedure is admittedly less efficacious than the other, but Dr. Devillers prefers it because the flame untempers the steel and affects the point. When pistols are used, the doctor has no duty in regard to them. "We have not yet arrived at an attempt to asepticize balls, which precaution would, moreover, prove futile, since the seconds ordinarily take care to make this kind of *rencontre* as harmless as possible in the simplest manner, viz.: by loading the pistols with balls of too small a calibre, whence it is quite an accidental occurrence when a severe wound ensues upon a pistol duel!" When the combatants are in position, the director takes his place on one side midway between them, the seconds and physicians facing him on the other. During the duel the physician must not intervene, save at the request of the seconds; but he is charged with watching the swords, to see that in no case does the point touch the earth. Should that occur, it is his duty to claim it and render it once more aseptic. What is the duty of the surgeon when, one of the combatants being touched, he is appealed to for his opinion? Dr. Devillers says he should hold himself strictly to the terms of the *procès-verbal*, which says that the duel shall cease "on the advice of the doctors when one of the adversaries shall be in consequence of his wound in a state of marked inferiority." From this Dr. Devillers concludes that the doctor is not called upon to occupy himself with the state of the breathing, the fatigue, or the moral condition, such as fear, anger, etc., of the combatants. The situation and probable depth of the wound alone ought to guide him, so far as can be approximately ascertained without probing, from the appearance of the sword which caused it. And here comes in one of the inconveniences of modern aseptics. They dim the brilliancy of the steel, and so render this mode of estimating delusive. The blood, however, will often be a sufficient indication. Dr. Devillers says: "For my part, I never stop the duel if there is only an abrasion or a surface wound; I have too much respect for the duel to allow it on any account to be rendered ridiculous, thinking, as I believe rightly, that in a

nation where every one is a soldier it is better to settle one's differences sword in hand rather than by the demoralizing spectacle of a pugilistic encounter."—*New York Medical Journal.*

Medical Comforts for the Sick of the Army.—The following memorandum from Surgeon-General Sternberg of the army embodies his reply to women's relief associations, societies and individuals who have written requesting him to direct their benevolent and patriotic efforts on behalf of the sick and wounded:

"Having received numerous letters from patriotic ladies asking what articles would be most acceptable for the use of our sick and wounded soldiers in the field or in hospital, I have prepared the following memorandum to be sent in reply to letters of inquiry: Money may be sent to the Surgeon-General of the Army as a contribution to the hospital fund of the hospital ship *Relief* and of United States general hospitals. This will be sent to the surgeons in charge, to be expended for delicacies for the sick, such as canned soups, jellies, lemons, oranges, etc. Those who prefer may contribute canned soups, clam broth, orange marmalade, ginger ale, Albert biscuit, Bent's water crackers, and similar articles in hermetically sealed cans for use on the hospital ship *Relief* and at the United States general hospitals at Key West, Fla., Fort McPherson, Ga., Fort Thomas, Ky., and at Fort Myer, Va. Bandages, lint and other surgical dressings are not desired, as these can now be obtained from the manufacturers sterilized for use and of the quality which experience has shown to be best suited to our purposes. Shirts and drawers are provided by the Government, but will be accepted and can be given to convalescents upon their discharge from hospital. Pajamas made of light gingham will be useful for the sick in hospital and on the hospital ship, as they can be worn by convalescents who are able to be out of bed. Long nightshirts of light muslin can also be utilized. Broad bandages of light flannel to protect the abdomen are highly recommended and may be worn to advantage by our soldiers in the field. The articles mentioned may be sent direct to the Surgeon-General of the Army, or to the surgeons in charge of the general hospitals named."—*Journal American Medical Association.*

Theories of Healing.—Professor Behring, in a recent address (*Deut. med. Woch.*, No. 5, 1898), at the Marburg University, gave an interesting account of the history and development of the etiological and isopathic theories, and of their influence on the thought of the time. Broadly speaking, the etiological theory is concerned with the causes of disease existing outside the body only, whilst the isopathic theory is chiefly concerned with the means employed for protecting the body from external causes of disease. Professor Behring gave a short history of the earlier theories of healing with the appropriate motto for each. The Hippocratic principle was contained in the words "aliena alienis," whilst the opinions of Galen

were embodied in the words "contraria contrariis." The motto of homœopathy is "similia similibus," whilst "æqualia æqualibus" belongs to isopathy, the most modern development. Professor Behring described the difference between "old" and "new" theories by criticising the explanations given by each concerning the action of quinine in malaria. This drug was used by Sydenham, who was the first to observe the remarkable effect it had on the disease. At one time quinine was said to "brace up" the nervous system and thus render the body less "impressionable" to the action of the malaria poison. In modern times attention has been solely directed to the hæmatozoon in the blood corpuscle, whose vitality is more or less affected by quinine. Lister is called the pioneer of the etiological theory. The fact that wounds will heal of their own accord if allowed rest and cleanliness was one of the most startling revelations of modern times. The action of antitoxin and serum therapeutics in general formed the chief part of the address, which contained a summary of the work done by authorities such as Pasteur, Koch, Ehrlich, Wernicke, Pfeiffer, and others. —*British Medical Journal.*

Professor Koch on Malaria.—At the last meeting of the Berlin Colonial Society, Professor Koch, who has recently returned to Germany after a long absence in India and South Africa, read a paper on Tropical Malaria. There was a large attendance of members and visitors belonging to the medical profession, who received Professor Koch with loud applause on his entrance, and, although he spoke on medical subjects before a mixed audience, his hearers listened with the greatest attention for the two hours during which the proceedings were continued. He said that malaria is the specific disease of the tropics; it is the most terrible enemy there is to contend against in these regions, and the full advantages of the colonies will not be realized until it is overcome. The first step in meeting it is to know how it arises. For this purpose Dr. Koch has investigated a tropical disease of cattle which is somewhat like malaria. This disease is the so-called Texas fever, the cause of which has been stated by Smith to be a parasite—parosoma bigeminum. The parasite is present in the blood of the animals and its germs are spread by insects called "ticks." Cattle coming from the north only catch the disease when ticks have access to them. Professor Koch, to verify the statement of Smith, made the following experiment. He collected ticks from healthy as well as from sick cattle and took them to a distant place where Texas fever had never yet occurred. Healthy cattle were then inoculated with the eggs of ticks of both categories, the results being that the eggs obtained from sick animals gave Texas fever to the inoculated cattle, whereas the eggs from healthy animals produced no effect. Cattle reared in places where the fever was endemic did not always show this reaction, apparently because they had suffered from it when young and had therefore become immune against it. Some of them became infected, but in a slight degree only. It is thus possible to

obtain an artificial immunity against Texas fever. Malaria, like Texas fever, is caused by parasites in the blood. Laveran and some Italian pathologists detected in the red corpuscles a specific parasite which is very motile and grows somewhat quickly. The climax of its development coincides with the maximum temperature during the fit and it afterwards breaks up into spores which again invade other corpuscles. There are two clinical forms of malaria; one, occurring in Europe, is characterized by a regular course of fever, as quotidian or tertian malaria, the second or malignant form, which only develops in hot climates, shows a very irregular temperature. The relation of the parasites to the different kinds of fever has not yet been ascertained. There was no strict indication in the treatment of tropical malaria, as quinine was given at random without considering at what time it might be most efficacious. As a rule it was taken in divided doses throughout the whole day. By microscopical investigation Professor Koch has now discovered that quinine will most surely overcome the parasite at the period preceding the above-described sporulation. The time when quinine must be taken is thus to be determined in the individual case by microscopical examination of the blood, and Professor Koch called special attention to the fact that quinine administered at the right time is able to cure the disease. When the fever has ceased one gramme of quinine must be administered every five days for two months. Blackwater fever, in his opinion, is not due to malaria, as parasites have never been found present in these cases, but is the result of a toxic effect produced by quinine. With respect to the mode of infection Professor Koch said that various conjectures have been made, but nothing is definitely known, and it has not been ascertained how the parasite enters into the blood of the patient. There is no direct infection from one person to another, the malady not being contagious, and infection by air or water is not likely. Diseases, however, are known in which infection is conveyed by insects, as in Texas fever, and it is remarkable that there is no malaria where there are no mosquitoes. This is, for instance, the case in some islands near the African coast and in the Usambara country. The mosquitoes probably deposit their eggs on the human body, the parasites issue from these eggs, and when their number has increased the disease develops. The time of incubation is about ten or twelve days. As to immunity Professor Koch is of opinion that persons who have once caught malaria and have recovered spontaneously without quinine possess a certain degree of immunity. The natives of the coast who never catch malaria, owe their immunity to the circumstance that their ancestors have passed through the disease. If, therefore, a natural immunity is possible it may be hoped that means of producing artificial immunity may be discovered some day. The measures which have hitherto been used against malaria, such as draining of marshes, planting of eucalyptus trees, and establishment of sanitaria in mountain districts, have failed. What is wanted is to teach the medical men in the colonies how quinine should be given and to construct the dwellings of the

Europeans so that the mosquitoes may be kept off. In conclusion Professor Koch said: "When we are able to destroy malaria in our colonies we shall have peacefully conquered one of the most beautiful and fertile countries of the world."—*Lancet.*

First Qualified Woman Physician in Europe.—The first qualified woman physician in Europe, as far as is known, was a young Athenian woman named Agnodice. In the year 300 B.C., she disguised herself as a man and began to attend the medical schools at Athens, which it was against the law for a woman to do. She afterward practised among the women of Athens with extraordinary success. Her secret becoming known, she was prosecuted for studying and practising medicine illegally. The Athenian women, however, raised so furious an agitation in consequence that the case was dropped and the law repealed. Coming to later times, we find several women who obtained the degree of doctor of medicine and practised in Europe before 1492, especially in the Moorish universities of Spain. Trotula, of Rugiero, in the eleventh century, had a European reputation and practised in Salerno. At the beginning of the fourteenth century Dorothea Bocchi not only received the degree of doctor but was professor of medicine in the University of Bologna. Since then two other women have been professors of medical subjects in the same university, Anna Mangolini (anatomy) and Dr. Maria delle Donne (obstetric medicine), the latter being appointed in 1799. In the year 1311 an edict was issued in France forbidding surgeons and female surgeons from practising until they had passed a satisfactory examination before the proper authorities. These female surgeons are again referred to in an edict in 1352.—*Journal American Medical Association.*

Wandering Troupes of Foreign and Contagious Exanthemata.—A troupe of negroes from Koto, one of the German South African Colonies, has been on exhibition for some time at one of the museums in Berlin. An exanthematous disease made its appearance among its members that for some days puzzled the diagnostic ability of the German physicians, unaccustomed as they are to seeing eruptions on dark skins. The affected ones were promptly segregated, however, even before the diagnosis was assured, and the result justified the precautions, since the affection turned out to be small-pox. Among the troupe so far some fifteen cases have occurred, the first time that so many cases have been in Berlin in many years. How little solicitude the occurrence of the disease has evoked may be judged from the fact that Professor Senator invited his class, consisting of more than one hundred students, to come with him to the Institute for Infectious Diseases to see and study with him a case under his care there. No special precautions were taken and students were allowed to approach and see and even feel the lesions. Those who had not been vaccinated within recent years were warned of their danger and advised not to come.

Evidently the Germans have unbounded faith in the value of vaccination, and the statistics of Berlin since the enforcement of the universal vaccination requirements would seem to justify them, for, as I have said before, Berlin's mortality and morbidity from small-pox compared to that of Paris, where vaccination is advised but not required, is practically *nil*.

These wandering troupes of people from lands where vaccination is unknown are always the subject of special watchfulness as regards small-pox outbreaks here in Germany. The well-known liability of the disease to spread to all the members of the troupe and to occur in the severer forms which are scarcely ever seen any more in Europe has been often a subject of remark. Whether these people have a special liability owing to their being a virgin soil or whether the Europeans, after generations of vaccination, have acquired a certain constitutional resistance to the disease is not clear. Certain it is that the wandering of such people is considered to constitute a special source of danger in the carrying about of virulent forms of the disease and in their liability to contagion on the slightest exposure when Europeans escape entirely. A troupe of Eskimos wandering through Europe on exhibition some years ago were all carried away by small-pox.—*Medical News.*

The "Bugaboo of the Mad Dog."—The fact that there is such a disorder as canine rabies has been so long accepted by the medical profession that the other fact, made rather manifest within a year or two past, that there are some respectable physicians who doubt its existence seems at first sight unreasonable, if not absurd. Certainly the burden of proof lies on those who thus contest one of the established beliefs not only of medicine but of the general public from all time past, and it ought to require more than ordinary evidence to overthrow it. It may be admitted that it is a rare disease of the human species, in this country at least, and that its conventional syndrome is often counterfeited by nervous and hysteric subjects, even to the extent of carrying them to a fatal termination, without the actual infection having ever been in play, but these are by no means conclusive that such infection is a myth and that there is really no such disorder. The existence of a pseudo-rabies does not exclude a genuine form any more than does a pseudo-syphilis, and the mere fact of the comparative rarity of an affection is no argument against its occurrence, when that is attested not only by history and experienced observation but also by scientific control inoculations and other tests. There have been too many cases thoroughly observed and reported to make the skepticism that some profess, appear even reasonable, though it may be allowed as evidence of mental idiosyncrasy that when confined to purely professional discussions is harmless if not altogether admirable. The importance of prophylaxis in this disorder, however, is such, that if such views were likely to be generally adopted mischief might result, and this possibility is the more serious when statements are made in the lay journals

by popular writers that there is no such disease as hydrophobia and that the reported cases are "in reality nothing more nor less than instances of people who have been bitten by dogs and frightened into hysteric conditions in which they involuntarily reproduce all the supposed symptoms of hydrophobia," that the public, and especially the nervous and impressible portion of it, "should believe that there is no such thing as 'hydrophobia'" and rid themselves of the "bugaboo of the mad dog." There is perhaps not much probability of the popular faith in the existence of this disorder being destroyed, but it is more than questionable whether, on hygienic grounds, the medical profession ought to let such misleading statements go unheeded. Certainly they should not if they are accepted by any considerable portion of the public and acted upon accordingly. Such a course would very possibly cure itself in time by furnishing some indubitable examples of the disease that would have been avoided under the ordinary conditions and the heretofore accepted popular beliefs, but this is not a desirable outcome, of itself, and would be better avoided. The fact that the disease is rare in man in this country, is largely due to the popular apprehension, and the precautions thus induced. It gives rise no doubt to a slaughter of the innocents that the philozoists may deprecate, but this is probably unavoidable until there shall exist some higher degree of public enlightment and a more thorough and rational system of sanitary police. If at present a salutary fear of hydrophobia may cause hasty and indiscriminate extirpation of dogs, at certain times, and especially when one of the periodic hydrophobia panics exists, there is still reason to consider the results as not altogether evil. A superabundance of dogs is responsible for other evils than merely those of hydrophobia, and an occasional reduction of their number may be considered as a sanitary measure.

While it may be admitted that rabies, either canine or human, is not so common in this country, this is not the case in some other parts of the world. In Russia it is said to be much more frequent and the Eskimos know it and dread it and consider a winter distemper which is often very fatal amongst their dogs as a modified form of the disease. Pasteur analyzed over five hundred authentic cases in France and his authority will not be easily overthrown by those who, working with much more limited data, are so free with their deductions and criticisms, and insinuate, if not openly charge, that well attested and reported cases are simply "laboratory hydrophobia." A single well supported case would be sufficient to riddle the denials of the existence of the disease if not to fully establish its existence, and we have now probably hundreds confirmed by control experiments upon animals in which imagination and hysteria can be absolutely excluded. From a point of view of admissible medical evidence the question would appear to be fairly settled, so far as the present available data are concerned, in favor of the existence of the disease.

So long as an occasional case occurs and is recorded in the public prints it is not likely that the popular belief in the reality of hydrophobia

will become altogether extinct, in spite of all that may be said by those who disbelieve. It will be a misfortune, however, if popular writers, who are always ready to take up and vulgarize medical heresies, should succeed in creating any degree of false security that might lessen the necessary precautions against rabies. With such a disorder prophylaxis is a necessity and any error had better be on the safe side.—*Journal American Medical Association.*

Blindness in Spain.—A recent communication before the Berlin Ophthalmological Society of Professor Hirschberg, the well-known ophthalmologist, on blindness in Spain, seems of more than passing interest. It contains practically the substance of his paper before the International Congress of Hygiene at Madrid in April. A trip through Spain some years ago called his attention to the large number of blind beggars that he met in the cities. This led him to investigate the subject of blindness in the country. To his surprise the only official statistics he could find on the subject, those of the Government census of 1860, gave the number of blind to the 10,000 of population as only 11. As England, France, and Germany have 8 or 9 blind to the 10,000 inhabitants this seemed in utter discord with what was to be seen. Further investigation showed that travelers ever since the beginning of the century had been remarking the number of blind to be met with. Recently the Spanish doctors themselves have been waking up to the condition of affairs, and so it has all come out. Like everything else done by Spanish government officials the statistics, because of official negligence, are absolutely of no worth, and are the result of most carelessly gathered information. Meantime eye diseases have been spreading alarmingly. Hirschberg says he has never seen such marked phthisis bulbi, or so many cases of it as he met incidentally in Spain. Even among well-dressed people it is quite common to see individuals who have lost one eye, and such people with both eyes lost are not a rarity. Even in the halls of the Congress itself they were to be seen. Hirschberg, whose paper at the Madrid Congress was in Spanish in order to call Spanish attention to the subject, sounded a note of alarm as to the neglect manifested in such serious eye diseases as purulent ophthalmia neonatorum and trachoma, and demanded for the protection of the people themselves and of other countries more general medical attention to eye diseases.—*Medical News.*

"Ocular Thermometry."—On the 18th of January Professor Galezowski read before the Paris Academy of Medicine a paper entitled "La Thermométrie Oculaire," and he publishes the substance of it in the *Wiener klinische Rundschau* for April 3d. We all know now, he says, that the production of heat takes place in the depths of the tissues, as maintained by Richet, but that it is under the influence of the central innervation governing the activity of the heart and lungs. On making a

close study of the complicated laws of animal heat and endeavoring to make out their relation to the nutritive conditions of the eye, he came to recognize that the normal temperature of the eyeballs, as well as that of its annexa, varied with the age of the individual and differed to a certain extent from the general temperature.

The author then mentions the well-known variations of temperature dependent on the age of the individual, the period of the day, the part subjected to thermometry, the waking or sleeping condition, etc., from a consideration of which he has been led to propose to himself the question of whether or not observations of the temperature of the eye might be of service in the diagnosis and treatment of deep-seated ocular disease. The question which he satisfied himself had not been dealt with by the physiologists, resolved itself into three others: 1. Whether or not it was practicable to measure the temperature of the normal eye. 2. What instruments would be best for such measurements. 3. Whether or not any good would result from ocular thermometry.

By several years' observations he has been led to the conclusion that the eye will tolerate the contact of a suitable thermometer long enough for the temperature to be registered. With the aid of M. Peuchot, a Paris optician, he has contrived a thermometer, the "ophthalmo-thermometer," which consists of a rectangular bulb slightly concave on the side that is to be applied to the eye, and with the glass very thin, so as to heighten the sensitiveness of the instrument. The tube is bent in two places, so that the graduated portion stands upright when the instrument is in place.

As regards the third question, that of the utility of ocular thermometry, M. Galezowski admits that he can not yet speak positively, for his experience thus far is not sufficiently rich. He feels confident, however, that his observations will eventually warrant him in stating that measurements of the temperature of the eye may be turned to good account in enabling us to note the development and progress of certain deep-seated ocular affections, such as chorioiditis, chorioid hemorrhages, detachment of the retina, glaucoma, etc.—*New York Medical Journal.*

Death from Cutting a Wisdom Tooth.—M. Heydenreich reported to the *Société médicale de Nancy* on February 28th (*Presse médicale*, April 9th) the case of a man, thirty-three years of age, brought to his clinic and said to be suffering from mumps. There was high and persistent fever, rising to 104° F., with agitation, delirium, stiffness of the jaws, and swelling over the right parotid extending into the neck. When M. Heydenreich saw the patient on the third day of the grave symptoms, the condition seemed to have improved. The temperature was from 102.5° to 100.4°, consciousness had returned, and the swelling was strictly limited to the angle of the right jaw. The patient could open his mouth, and a drop of pus escaped by the jaw. All the teeth were there. It was certainly a case of suppurative osteitis of the inferior maxilla, due to the

eruption of a wisdom tooth. There was not at this time any indication calling for operative measures. The next day, however, the patient became semiprostrate, and in the evening the temperature rose to 104.9° F.; on the fifth day he was taken in a moribund condition to the hospital. There was complete left hemiplegia. A free incision was made by means of the thermal cautery as far as the zygoma, but no pus was found. He died next day at midday, the temperature being 98.9 F. The autopsy disclosed pus on the right side between the cranial vault and the meninges up to the level of the convexity, toward the median region, and suppurative osteitis of the cranium. On opening the meninges a bed of very thick greenish-yellow pus (showing meningo-encephalitis) was laid bare. There was no lesion in the interior of the brain.—*New York Medical Journal.*

A Monument to Hahnemann.—The remains of Samuel Hahnemann, the prophet of homœopathy, were recently exhumed from their resting-place in the cemetery of Montparnasse, in Paris, and transferred to Père-Lachaise, where a monument is to be erected to his memory. Hahnemann, who was born in 1755, spent the last years of his long life in Paris, where he died in 1843. His body was embalmed by M. Gannal, assisted by his son, Dr. Gannal, under whose supervision the recent second burial was carried out. Round the neck of the corpse was a necklace made of his wife's hair. The original embalming does not appear to have been a success.

A Sure Cure for Insomnia.—"I've cured my husband's insomnia."

"How did you do it?"

"Pretended I was sick, and the doctor left medicine which Henry was to give me every half hour all night long."—*Chicago Record.*

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ORIGINAL COMMUNICATIONS.

THE TUBERCULIN TREATMENT. RESULTS REPORTED AT THE RECENT CONGRESS OF TUBERCULOSIS.

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Koch's Tuberculin has undergone a remarkable series of ups and downs since it was introduced by him some eight years ago. The uncritical, enthusiastic acclaim with which it was immediately received, and the rush to experiment with it, were not less defensible than the sudden abandonment and unsparing condemnation of it a few months later, when it was found capable of working serious mischief in advanced cases, for which Koch himself never recommended it, and in very large doses equally unauthorized by him.

Fortunately, however, in this country, as well as in Germany, a few sagacious men, exercising a calmer judgment, continued to make cautious trials of the remedy in cases suitable for it, and with encouraging results.

Prominent among these were Whittaker, of Cincinnati; Dennison, of Denver, Colorado; Von Ruck, of Asheville, N. C.; Trudeau, of the Adirondack region, N. Y., and Professor Klebs, of Germany, now of Chicago. These men had the penetration to see that just as many active drugs are toxic and dangerous when pushed to their full physiologic effects, and yet are capable of the most beneficent curative influence in the proper dosage, so tuberculin might do either good or harm according to the manner of its administration. As a result of their persevering experiments the new method of treating tuberculosis is now gradually gaining recognition and is likely to have eventually an assured place in our therapeutics.

I had a considerable experience with tuberculin in small doses, very cautiously and gradually increased, while practising in Thomasville, Ga., in the winter of 1892–93, and later with occasional cases in Atlantic City.

My results, while not often striking, were in the main favorable. But, with a practice limited almost exclusively to referred patients, I could not conscientiously continue to any large extent the use of a remedy however promising which the physicians from whom the patients were received distrusted, and in many instances earnestly and honestly denounced. Moreover, except during the one winter in the South, I have not seen a large number of tubercular cases, especially during the last five years, having been occupied mainly with my special practice.

It is by no means claimed that the tuberculin treatment has yet become established in the confidence of the profession or that all the adverse criticisms have ceased. On the contrary, there are still numerous able physicians who distrust it as much almost as ever. This is especially true in France.

The Congress of Tuberculosis held in Paris from July 27 to August 3, 1898, under the presidency of Professor Nocard, of Alfort, brought out in a prominent manner the diversity of views still held, especially in that country, with regard to the various preparations of tuberculin. The president in his opening address ranged himself among the sceptics in this respect, but reported no experience of his own in the use of the remedy. Arloing, Courmont and Nicholas of Lyons presented the results of an experimental investigation with Koch's new tuberculin (T. R.) which were not confirmatory of the results reported by Koch himself. They explained this discrepancy by either variation in the properties of tuberculin or the virulence of the tuberculosis, or else by a difference in the *modus operandi*. Their experiments seem to have been on animals exclusively, and in this field Koch is certainly a far more competent observer.

The reports from the clinical side were also contradictory, but it is noteworthy that the adverse reports were in each instance based on a very small number of cases and came from men who clearly had had only a slight experience in the method, while the favorable ones were based on trials extending over long periods of time, in one case eighteen months, and in another two years, and covering a much larger number of cases.

For instance, Landonzy reported six cases in which he had employed Koch's T. R. without any positive results either way. The only conclusion to which he could come was that while the remedy "did not cause any manifest improvement either general or local, on the other hand it did not appear to have any injurious effects." The summary of this report, which is taken from the *British Medical Journal*, does not indicate whether the cases were pulmonary or otherwise, or whether they were in an initial or advanced stage.

Leclerc, of Lyons, reported that he had treated eight cases with T. R., five of pulmonary tuberculosis and three of tubercular bone disease. He considered the remedy less dangerous than the original tuberculin, but to have no curative effect whatever. This seems a rash conclusion to be based on so small a number of cases.

Vagnier, of Villiers-sur-Marne, stated "that he had tried T. R. in five cases of children suffering from pulmonary tuberculosis *in different stages*. As long as a dose of one milligram was not exceeded the injections were well borne; larger doses produced febrile reaction of some intensity. The pulmonary lesions seemed to be in no way affected by the treatment." Considering the fact that this observer confessedly treated cases in advanced as well as early stages and administered doses that could easily be excessive for young children, the only wonder seemed to be that he had not worse results.

Bourhial, of Algiers, had employed doses up to nine milligrams and obtained only ill effects. Neither the number nor character of the cases treated by him is stated in the epitome published.

Dr. Benoit, of Paris, on the other hand, reported that he had studied the effects of the new tuberculin both in animals and in the human subject, and took a much more favorable view of it. In cases in the early stage, uncomplicated by secondary infections, "it had been distinctly of service and sometimes had even brought about cure. This was noted in cases of pulmonary tuberculosis without fever in the first and second stages, in tuberculosis of bone and in cystitis and sarcocele of bacillary origin."

Denys reported that a new tuberculin had been under investigation for eighteen months in the Bacteriological Institute of Louvain and had been found experimentally to possess both preventive and curative properties. Clinically in nineteen cases of tuberculosis in the last stage, the result was nil, but in six cases of febrile tuberculosis with moderate or slight lesions the temperature was reduced and improvement took place. "Improvement was considerable in cases of apyretic tuberculosis even when cavitation had taken place, provided the invasion of the lungs was not extensive. In a series of forty-eight cases of this kind there were fifteen cures (disappearance of bacilli or cessation of expectoration) and twenty-five instances of improvement, while in two the condition remained stationary. There were six deaths, four due to inter-current complications and two to excessive emaciation. In none of the cases was any medication whatever employed except the tuberculin. The treatment was carried out in accordance with Koch's principle, beginning with small doses which were increased as tolerance became established." Denys advises that if intense reaction follows an injection, the treatment should be suspended for some days. The use of the remedy should be continued for six to twelve months or longer. The report adds that in no case did Denys "observe either extension of the disease in the lung or development of new foci in distant parts." He promises to publish full and detailed directions for preparing his tuberculin as soon as he has perfected his method.

These results of Denys may seem extraordinarily favorable, but in fact they are no better than those long ago reported by Dennison and Von Ruck as having been obtained with simple dilutions of the original tuberculin and less favorable than some that have been claimed for Klebs' and other similar modifications of tuberculin prepared in this country.

At the same Congress in Paris J. O. Hirschfelder, of San Francisco, presented a communication concerning another new modification of the same remedy, and called by him oxytuberculin. He claimed to have been experimenting with these preparations since 1896, beginning with Koch's original tuberculin. Now he prepares a modification of his own by cultivating the tubercle bacillus in veal broth mixed with 4 per cent. of glycerine, 1 per cent. of peptone and 0.5 per cent. of chloride of sodium. To this a normal solution of carbonate of sodium is added in the proportion of 3 cubic centimeters per liter. Cultures made on this medium are sterilized by heat, and then, filtering, tuberculin is obtained. His processis apparently fully detailed in the published reports, and he claims that in a series of 70 cases of tuberculosis treated by him with this preparation "the results have been very encouraging. Improvement has been noted in many cases and cure in some; in particular, one case of miliary tuberculosis was cured contrary to expectation." It is added that "Hirschfelder has further satisfied himself that cutaneous tuberculosis can be cured by oxytuberculin."

Hirschfelder insists that his preparation is not toxic and can be injected into the veins of animals whether healthy or tuberculous, even in large doses, without causing a rise of temperature. If this be true, we may well suspect that he has refined pretty much all the curative virtues as well as the activity out of the tuberculin and his statistics as summarized in the published report have a vagueness about them which lends some confirmation to this idea.

The numerous efforts in various parts of the world to modify tuberculin in such a manner as to remove its toxic power and, at the same time, retain its assumed bland or innocently acting curative principle, have been quite probably inspired by an erroneous theory. We know that we can easily poison our patients, or at least obtain disastrous physiologic effects by administering too boldly and continually digitalis, mercury, arsenic, nitrate of silver or various other active drugs. Yet, instead of trying to get up some laboriously refined or emasculated preparation of them, we simply give them in doses very much smaller than those found experimentally to be dangerous, being careful not to push them too long and meanwhile watching carefully the results. This would seem to be the sensible way to administer tuberculin, and in this way substantially the most fortunate results reported from its use in many quarters have been obtained, whether the preparation employed was a simple dilution in carbolated water or an expensive and mysteriously concocted modification which amounted possibly to the same thing, the active principle having been diluted by removal through filtration or otherwise sufficiently to render its effects therapeutic instead of physiologic or toxic.

It must not be forgotten, however, that the men who have reported the largest percentage of cures with tuberculin are experts in the treatment of tuberculosis and several of them practise in places exceptionally well

adapted to the arrest and ultimate cure of the disease. They have reinforced the specific treatment not only by the help of climate, but also by the most painstaking care as to diet, exercise, clothing, oxygenation and all other possible hygienic aids. Nor can it be objected that these other potent aids to cure and not the tuberculin should be given the whole credit. The physicians now referred to, being experienced and expert in the treatment of such cases, should be believed when they insist that under the same conditions otherwise their tubercular cases have done decidedly better with tuberculin added to the treatment.

A CASE OF TYPHOID SPINE.

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THE pathology and etiology of the disease known as typhoid spine is very vague and uncertain; many of the best authors even doubt its very existence, claiming that it is a coincidence of some other disorder, such as lumbago, occurring immediately after typhoid fever. Certainly very few have observed cases of any severity and no deaths have ever been reported assigned directly to this cause. Those who have reported cases are divided as to the cause; some believe that it is due to some inflammation around the spinal column, either an inflammation of the periosteum, ligaments or deep muscles. Gibney, of New York, believes it to be a "perispondylitis" and was first to call attention to it in 1889. Others believe it to be due to a neuritis, and some think it is hysterical. Osler states "that even if the great majority of these cases are hysterical, some of them may be due to alterative changes of the disease," and in his text-book states that he believes it to be of the character of a neuritis. Tyson in his text-book gives the following: "It may be a spondylitis but is probably a pure neurosis. Allied to this condition is perhaps an obstinate periostitis of the sternum, or the crest of the ilia, or front of the spinal column, after typhoid fever. Alluded to by William Pepper in the "Text-book by American Teachers" we find "the conditions are rare and sometimes at least may be coincidences."

Great destructive change in bone tissue seem more liable to occur after typhoid fever, as has been proven by Keen in his monograph upon the "Surgical Complication of Fevers" in which, out of a series of forty-one cases, thirty-seven were due to this one cause alone. This would seem to make it appear that it might be some inflammatory condition about the spinal column, but at a glance it can be seen that nerve structure becomes

also inflamed from the same cause, and many cases of distinct neuritis have been reported.

A disease that resembles it very closely is railroad spine, and so in this disease is the pathology and etiology uncertain and very scant. Specialists in nervous diseases admit that they have to rely solely upon the history of the case for a diagnosis, and should a patient care to feign this disorder it could only be denied by tripping him in some false statement.

This is not likely to be so in a convalescing typhoid fever patient. So long as no pathological evidence can be obtained there will always be a doubt as to whether the pain is due to a neuritis or inflammation about the spinal column. The history of these cases is typical: they are progressing nicely when suddenly, from some slight cause, they are seized with a severe pain in the back, usually in the lumbar region but often in the dorsal, sacral or cervical. The course is often severe, but, as a rule, they clear up without any permanent injury.

A. W. Single. Seventeen years old. Female. Candy maker.

Family history: Father and mother living and well, also an older brother and sister.

Personal history: Had always been well and healthy until about three years ago, when she had some stomach trouble of indefinite nature.

Present illness began in March with an attack of typhoid fever, which ran a normal course. Patient was not delirious. Temperature reached 104° upon several occasions. The other symptoms were typical. She was sponged and when this failed she was placed in an ice-pack. Toward the end of the fever the patient complained of more or less pain in her back and thought it was due to the cold used to reduce the temperature. However the pain entirely disappeared and she was soon able to sit up and walk around the house. About two weeks afterward she was taken with a severe pain in the lower part of the back radiating out toward her hips. She could not lie down, but had to be propped up with pillows in a chair, and when standing was bent forward and drawn to the right side. The least motion promoted severe pain in the affected parts. Like many spurious pains, it was thought to be rheumatism, and that line of treatment was probably carried out. She improved slowly and in a month was able to move about with but a small amount of pain. She was still bent forward and slightly to the right.

Exercise, in the form of bicycle riding, was prescribed "to limber her up" and "straighten her spine." Several short rides were taken and on one of these she fainted, but could not account for the cause, as she felt no special discomfort resulting from the exercise. The following day her back gave her considerable annoyance, the pain lasting several days. After this attack she again improved and continued well for about two months, when she was seized with another severe attack. At this point, being unfamiliar with the case, anti-rheumatic, anti-neuralgic, with sedative remedies, *i. e.*, salicylates, acetanilid salol, belladonna, bromide and trianol were

tried but without success, and finally morphia had to be administered to relieve the pain.

The back was then carefully examined; there was great tenderness over the second and third lumbar vertebræ. The slightest pressure would cause intense pain, which could be felt for some time afterward; it would radiate to the hip, the right iliac bone being more tender than the left. She was still bent forward and to the right and could not straighten herself. Pressure anteriorly, through the abdomen upon the spine, caused some pain, although it could not be compared with that caused by pressing upon the spine posteriorly. Besides this acute pain, she suffered from a continuous dull one in the affected parts. There was no elevation of temperature, but it ran an irregular course, varying from 98° to 100° throughout the illness. The position affording most comfort was lying with her head bent forward, legs drawn up, and body bent to the right. Her general health, since the fever, during the interval of these attacks, was fairly good, but she suffered from a slight dyspepsia and was obstinately constipated. Menses were about two weeks late. During the fever she had considerable trouble passing water, although no pain; this returned when these attacks occurred.

The treatment adopted in this case was extension weights, of about eight pounds to each foot, with the idea in view of decreasing the strain upon the spine. In a few days the morphia was diminished and was altogether stopped in a week. The weights were kept in place for four weeks, and by that time all tenderness over the back had disappeared and the patient could turn in bed with ease. The weights were then diminished slowly, taking off one pound every other day until all were removed, when the patient was kept in bed for another week, then allowed to sit up for a short time each day, gradually increasing until she was able to pursue her daily routine. All violent exercise was restricted for some months.

With this treatment general tonics and laxatives were given as required. She is now perfectly well.

It would seem here that it was due to some inflammation around the bone structures, as over the two lumbar vertebræ and iliac bones most pain was felt. It did not follow the course of any of the larger nerves, nor were they tender. The reflexes of the lower limbs were normal, therefore it was hardly likely to be a neuritis. It certainly was not hysterical. The pain was decidedly lessened by extension weights, while rest alone, in bed, gave no relief at all, even under powerful nerve sedatives which were tried at first.

Others have reported cases that have the same characteristics as this one and, whether the cause of it is an inflammatory condition of nerves, muscles or joints, it is troublesome and painful. It might be possible in one case to be a neuritis, while on the other it might be the periostitis. They are both painful and require prolonged and tedious treatment for their relief.

As to the propriety of regarding this as a special disease (for some claim it is only multiplying terms), in this case it is no doubt justifiable for the simple reason that the cause is a disputed question.

NEEDS OF THE MEDICAL CORPS OF THE ARMY AND NAVY.

BY A. L. BENEDICT, M.D.,

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Since the Civil War the art of medicine has undergone changes which render greater attainments possible in the work of the medical staff of the army and navy, but which, at the same time, involve a greater attention to detail and a greater necessity for division of labor. In 1861 a studious, faily well experienced practitioner could conscientiously consider himself equal to any professional emergency, excepting only the most obscure and obstinate cases, to which he summoned counsel, in the main, like himself. Although even a specialist must admit that specialism has been carried to ridiculous extremes in certain instances, the last three decades have established the necessity of a division of the field of medicine and, with increasing experience, each practitioner finds his disabilities growing concomitantly with his abilities. In particular, a sharp demarcation has been made between medical and surgical work and, while the disastrous results of encroachment by the physician on the domain of the surgeon are perhaps more conspicuous, the sins of omission perpetrated by the operator who essays also to be an internist, are probably not much less fatal. It is no discredit to the noble men who acted as surgeons during the Civil War to say that a repetition of their work at present would amount to malpractice.

So much does the proper qualification of the surgeon depend on extrinsic circumstances that it is almost an impossibility for a medical graduate to become a thoroughly competent operator, unless he is situated in a populous city and unless he has certain opportunities which can scarcely be obtained without the factor of personal influence. At every general meeting of military surgeons is witnessed the paradox that the men of higher rank, as well as of greater professional attainments, are soldiers in name only, being connected with the National Guard. This is due to the inevitable fact that the average army post, in time of peace, does not present opportunities for practice other than venereal that can be compared with those even of the tyro of private life. As might have been anticipated, no difficulty has been found in providing sufficient surgical staffs for the troops already raised. In fact, it is the wonder of the world and the pride of America that the recent war, coming as a surprise to the great mass of sober-minded citizens and contrary to their opinions, has found more than enough men willing and anxious to serve the country with gun, sword or scalpel, as needed. And, so far as can at present be judged, these volunteers are not only willing, but competent for the tasks before them.

But, with all respect to the appointees to the surgical staff of the present

volunteer army, it seems that a genuine demand still exists for strictly medical service. Some of the regiments have already found a very practical need of dental service and it is unnecessary to argue that a like need exists at least for oculists in the examination of naval recruits. We do not intend to discuss the matter from the standpoint of the highly differentiated practice of large cities, nor to ask that troops in the field have the benefit of a staff representing specialties of all kinds, but we believe that a practical need for physicians exists and that both the army and the navy will suffer if this want is not filled. The government has acted wisely in calling for expert study of the sanitary problems to be solved by an army of occupation in Cuba, but, beside sanitation and surgery, there will be much that lies in the domain of medicine, even of medication. Few campaigns since the hand-to-hand conflicts of the ancients have killed as many men by violence as by disease. In some historic European campaigns, armies have been temporarily rendered non-combatants on account of diarrhœa, and large bodies of troops have been decimated by dysentery and other infectious diseases. During our own Civil War, there were killed in battle 61,000; died as the late result of wounds, 35,000; died of disease in our hospitals, 183,000; died in prison, 30,000. Thus, in a war fought within our own boundaries, and at a time when surgical skill had not made the relatively greater advance, as compared with the development of medicine, at a time, also, when weapons were less destructive than at present, the disease mortality was more than double the traumatic mortality. Scurvy, variola, relapsing fever, Asiatic cholera, typhus fever as well as surgical sepsis, which have produced such frightful ravages in past wars, were not to be important factors in the recent one. Measles, scarlet fever, dysentery, typhoid, and particularly yellow fever, are to be expected in any campaign in the tropics, especially by unacclimated troops. Even modern sanitary science can scarcely be put upon a portable footing, and the very fact that many of the soldiers have come from cities in which precautions against infectious diseases have been successfully carried out for several years, adds to the susceptibility to these diseases. On the other hand, the assumed existence of an immunity to yellow fever which was made a practical basis for the enrollment of certain troops, is denied and, for this or strategic reasons, the attempt to invade Cuba with immunes was abandoned.

Alcoholism and venereal diseases are practically unpreventable accompaniments of the vicissitudes of a campaign. It is stated that, during the civil war, an epidemic of gonorrhœa would sometimes affect a regiment to such an extent that discarded dressings would whiten the bushes of the vicinity of camp. The excessive fatigue of army life would also cause a craving for stimulants that would defy all rules, and, as several disastrous battles testify behind the smothering hand of official history, level all ranks. To draw a parallel from the present, we find the British army in India reduced at the beginning of one of its campaigns, 10 per cent. below the standard, by venereal disease alone.

No further discussion is needed to show the importance of strictly medical service in the recent war, as in any that can be anticipated. As a matter of individual courtesy, we might be disposed to admit that a competent surgeon, who has for years devoted his study and limited his practice to operative and mechanical troubles, is also competent to attend to strictly medical diseases. But very few of the surgeons would make any such claim. On the other hand, there are many members of the American medical profession who would gladly tender their services to the government and many who actually have done so and have received appointments, who are not surgeons by natural bent nor by training. If conscientious and sensible of their own limitations, these men should not be excluded from the privileges and responsibilities of army service; if they are disposed to use American volunteers to regain a long forgotten knowledge of anatomy or to acquire a skill in the use of the knife and the suture, their aspirations should receive a check. In short, we plead for the establishment of a division of the medical service of the army and navy into surgical and medical branches, cognate and co-equal.

SELECTED DIGEST.

ON PRACTICAL POINTS IN PERCUSSION AND AUSCULTATION, AND IN THE PHYSICAL EXAMINATION OF THE CHEST.

ABSTRACT OF LECTURES TO ADVANCED CLINICAL STUDENTS.[1]

BY WILLIAM EWART, M.D., F.R.C.P.,

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On Pleximetry and on Pleximetric Bones and Viscera.

THE subjects for these lectures have formed part of your earliest clinical training, and to those of longest experience among you they may perhaps sound like a tale twice told. You can all look back upon many teachings and upon an endless reading of books. Nevertheless much that I have to tell you is not to be found in the latter. The subjects to which I mean to refer are matters of practice, and they specially concern you as budding practitioners in view of your coming function of independent diagnosis. Having learned the approved methods and trudged through the monotony of routine, it is time that you should step more freely. We

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must now let you into some of the secrets, and I venture to hope that this initiation will mark for each of you the passage from the stage of tyro to that of the expert.

Being practical, much that I have to convey lends itself imperfectly to verbal description, and will be demonstrated to you on the living subject at ensuing meetings. The indispensable introduction to these demonstrations which must claim our attention to-day happens to be the most theoretical portion of the whole subject. But as we proceed you will perceive that it is less abstruse than the title might imply, and you will live to regard an acquaintance with pleximetry, and with all that which I have ventured to include under the heading of "Pleximetric Bones and Viscera," as among your most serviceable acquirements.

Pleximetry and the Pleximeter.

The pleximeter is to be avoided by the beginner. He should learn to use his fingers and train their tactile appreciation by unaided percussion. This temporary necessity is often used as an argument—but it is a negative one—against pleximetry; it really does not touch the question as to the merits of the latter.

In your case, after acquiring sufficient dexterity, it is legitimate to avail yourselves of this simple aid. The percussing hammer is an unnecessary complication, and a possible source of error. The right hand is admirably suited for this purpose. Its only fault is the power which it possesses of unconsciously "manipulating" the sound by its fine range of velocities and weights and by its register of after-pressures.

Dr. Kingscote has, however, lately re-introduced the percussing hammer in connection with his ingenious pleximeter, which does not work without it.

What is a pleximeter? Essentially any solid interposed between the percussing stroke and the surface to be set into vibrations. All solids are conductors of vibrations, but the selection of the material is important. There are two other points in which a pleximeter may be good, bad or indifferent, viz., the size and the shape.

Too great a size has been the chief fault of many pleximeters. They should not exceed the dimensions of the finger, lest it should be impossible to use them for the percussion of small hollows. In the facility for doing this no instrument can beat the finger. Dr. Sansom's pleximeter, which has been found so useful that I have not wished for a better one, carries out this indication and provides us with two flanges both of the same width (one-third of an inch), but of different lengths.

The shape of Piorry's flat ivory pleximeter is almost more convenient for the pocket than for the work to be performed. For finer percussion it had to be used on its edge, and this was not satisfactory. The shape of Sansom's pleximeter enables it to be held between the sides of the fingers

whilst the pulp will receive from the upper surface of the flange the tactile vibrations.

The faults and the advantages of the pleximeter.—A pleximeter may be of the wrong material, size or shape. This alone would not constitute an argument against pleximetry, but there are inherent faults to every pleximeter.

1. All solids yield, when percussed, a sound of their own, varying according to their density. This may be very slight, as in the case of soft india rubber or of any soft material; but vibrations would be very imperfectly conducted by them. We have to use, for the sake of conduction, dense substances, such as wood or vulcanite, and the sound obtained on striking these is of that high pitch which is the chief factor of the so-called "dulness" of percussion. It is obvious that when you strike the chest through a pleximeter this high-pitched note will add itself to the vibrations elicited, and that the percussion sound will be modified. Thus the percussion of the same spot will yield a different quality of sound according as you use the finger or the pleximeter.

This fault is really an advantage; and it is upon this peculiarity that the value of pleximetry is based. In a small pleximeter such as this, the superadded note of dulness is not considerable, but its presence causes any slight dulness to become perceptibly duller when percussed through it. In this way shades of dulness not otherwise readily perceived become obvious, and it becomes possible to trace out the dulling influence of a solid organ to the extreme limits of its extension. This determination of the actual size of organs can be carried out with rapidity and with great accuracy. The percussor acquires a well-justified confidence in his results; and in the hurried work of a busy practice he can get at his facts without delay and perplexity which any doubtful experiment entails. The pleximeter, in a word, is a fine *analyzer for dulness.*

If, on the other hand, the part percussed should be resonant, the slight twang of dulness special to the pleximeter is lost in the low-pitched deeper and fuller thoracic vibrations, and no element of mistake is introduced.

The advantages and the shortcomings of the finger.—As regards the quality of the material the finger is unsurpassed. It is flesh and bone like the parts percussed, and like them it has very little percussion sound of its own. Provided it be pressed sufficiently firmly, it complicates matters only by adding to the thickness of the tissues which the vibrations have to traverse. On the other hand, like other soft substances, unless it be condensed by firm pressure, it does not favor the transmission of vibrations; on the contrary, it deadens them, and this is the secret of the great difference in the amount of sound obtained from the percussion of the same surface by different percussors. In this respect the finger is inferior to the pleximeter. I need not refer to the damage or pain which it may suffer from being too constantly used. One great advantage which it certainly possesses is the information which it derives from a direct palpation of the surface.

The relative value of the methods.—We owe to pleximetry the chief advances in percussion. Piorry's work in tracing out the dulness of organs was done with its aid. Skilful finger percussion claims to be able to equal the results obtained by the plexímeter; but it seems to have lacked that clearness and precision which enable us to discover new facts, and to demonstrate them to others. Indeed, the exclusive use of unaided finger percussion must be held responsible for sundry imperfect notions which have prevailed until quite recently, *e. g.*, that the cardiac dulness and that of the liver could not be distinguished from each other, that the full extent of the anterior cardiac surface could not be traced, and that its margin could not be defined with absolute accuracy; and owing to the same cause the dorsal dulnesses have been overlooked or ignored. Yet all these ponits may be easily made out, even with finger percussion, now that pleximetry has shown the way and supplied the demonstration.

The Pleximetric Bones.

All the component parts of the bony thorax are natural plexímeters for the underlying organs, and among them the ribs, although these, except for the finest work in percussion, are commonly disregarded. But the pleximetric function of the other bones is of practical importance, and a knowledge of it is indispensable. I refer specially to the sternum, the clavicle, the spine and the scapula. Each of them tends to yield over its whole extent a uniform note, either dull or resonant. That is the general principle. But some of them transmit, in addition to this, local vibrations, so that the general note may be modified at various parts.

The sternum is the type of a pleximetric bone; and the resulting peculiarities of sternal percussion are generally put before the student. In most chests the sternum is resonant from end to end; but the expert will easily demonstrate that it is not evenly resonant. The resonance of the lower part of the sternum, which is so marked in spite of the solidity of the underlying heart, is purely pleximetric. This explains why the absolute cardiac dulness should invariably begin along the left sternal edge. Only when, owing to great cardiac enlargement or to effusion of fluid, the pericardial contents drive the right pulmonary fringe out of all contact with the right edge of the sternum, does the dulling influence assert itself. In its upper part the sternum is exceedingly resonant owing to the underlying trachea and pulmonary fringes. But below the manubrium, and above the level of the heart, there is a modification of this resonance—a slight partial dulness, which is often termed "retrosternal," and to which I have referred as the "prevascular dulness" in contrast to the precordial dulness because it is due to the great vessels.

The scapula is another instance of pleximetric resonance, or resonance by conduction; but its peculiarities in that respect have not received the same attention as those of the sternum.

The scapula is a huge pleximeter, and its percussion draws sound from a considerable pulmonary area. This explains the remarkable fact that so large a mass of muscle and bone should be resonant instead of dull; its considerable resonance is rather a bar to fine localizations. Nevertheless, just as in the case of the clavicle, attentive percussion may obtain even small dulnesses which may be limited to portions of the pleximetric surface. And I would remind you that laterally and below it is possible by shifting the patient's shoulder, or by raising the arm, to get at the thoracic surface itself, and this should be done in doubtful cases.

The pleximetric character of the scapular resonance is easily proved by comparative percussion, *i. e.*, by percussing alternately the surface of the bone and the thoracic surface all round its border; and, again, by causing the scapula to shift we can percuss one and the same spot (say in the interscapular region) alternately when that spot is uncovered and when it is covered by the shoulder blade. In health the percussion will be markedly more resonant (which is an apparent paradox) when the scapular mass intervenes and increases the thickness of the thoracic wall.

On the other hand, in given conditions the scapula may, likewise after the fashion of any pleximeter, add an increased dulness to the underlying dull area.

The mobility of the scapula and its size render it a striking and demonstrative instance of the pleximetric character of bones. But there are others.

The clavicle is strikingly pleximetric, *i. e.*, capable of conducting vibrations. A glance at the skeleton will enable you to realize this fact. You will observe how small is the upper aperture of the thorax, and therefore how small is the surface of pulmonary tissue which the clavicle overlies. Yet this is enough to render the entire length of the bones resonant on percussion.

Although the left apex is slightly narrower than the right, and in spite of other slight anatomical differences, the two clavicles yield in health percussion notes which are, practically speaking, identical. This is an important fact for the purposes of diagnosis.

I have implied that the clavicle is resonant from the sternum to the acromion, although it spans areas possessing the most different percussion values, between the highly resonant tracheal region and the exclusively solid masses at the tip of the shoulder. This is another important point of great value in diagnosis; but I shall call your attention in my next lecture to the fact that the clavicular resonance is not of the same degree throughout the length of the bone, but that under the influence of the surroundings it varies from point to point.

The spine and spinal percussion.—The spine is another natural pleximeter. Percussive exploration of the spine does not seem to have been practised; yet it is of great diagnostic value in many cases owing to the definiteness of its results. If you should percuss a healthy spine—and the

best way to do this is to apply the finger or pleximeter to the spinous processes, direct percussion being somewhat painful to the patient—the note will be resonant all the way down. This is easily explained by the proximity of the larynx and trachea to the cervical spine, and by the close contact between the dorsal spine and the lungs. Importance attaches to this invariable resonance which gives great significance to the occurrence of any dulness. Where any source of dulness exists to the right or left of the spine, still the spine remains resonant by reason of its contact with the other lung. Often when a moderate dulness pervades on both sides of it, nevertheless its resonance persists.

There is another fact of great practical importance. When, owing to some local pathological condition the spine is rendered dull, the dulness remains limited to that region affected by the local condition.

In addition to the resonance special to the spinous processes, there is also on either side of the middle line a narrow strip of resonance corresponding to the width of the vertebræ, and this may resist some of the slighter dulling influences.

This pervading resonance of the spine and vertebræ is one of the factors concerned in the production of the curved outline of the dorsal dulness in pleuritic effusion to which Damoiseau first called attention. It should be also borne in mind in any cursory examination for consolidation or for any other abnormality. You will now thoroughly understand that the immediate neighborhood of the spine does not afford a fair opportunity for pulmonary percussion. The true pulmonary note should be sought some distance away from the middle line.

Putting aside slight variations in degree, the same spinal resonance is continued below the twelfth dorsal vertebra over the sacrum, and usually as far as the coccyx. But at the level of the true pelvis it is apt to be modified by the contents of the latter, or in pathological states to be changed into dulness.

The uses of spinal percussion at various levels.—In the neck the aid of percussion is not often required, neither is it often needed above the level of the third dorsal. The region betweeen this and the twelfth yields the chief clinical results.

1. From the third to the fifth or sixth, mediastinal, glandular, or other swellings, particularly œsophageal new growths and the secondary consolidation of the edge of the lungs due to them, may produce definite dulness of the spinous processes, and they always give rise beyond the lateral vertebral strip of resonance to a definite impairment of the pulmonary resonance.

2. The heart's region included between the fifth and the tenth does not yield, putting aside exceptional cases, any dulness of the spines themselves.

3. The hepatic region from the tenth to the twelfth likewise fails to present dulness of the spines, except in children. But where there is ef-

fusion of fluid into the pericardium these spines become dull, as well as the surfaces adjoining them, chiefly on the left side. I have given to this dulness, which is a valuable confirmatory sign of, and indeed, in adults, a test for the presence of effusion, the name of "the lower dorsal dull patch." You will have no difficulty in identifying its presence in all cases of even moderate effusion.

4. Below the twelfth the spines are generally resonant on percussion, owing to the vicinity of gas-containing bowel. But their resonance may be impaired in some cases in connection with considerable solid deposits in contact with the vertebræ. I need not allude to percussion of the loin, which is commonly practised. The outline of the kidney, whether in health or disease, can with sufficient practice be easily made out; and this exercise should not be neglected by clinical pupils.

Percussion of the sacrum, and, in association with it, percussion of the iliac bones, has not been practised within my observation, and yet it may supply information not otherwise easily got. Intra-pelvic disease does not necessarily give rise to absolute dulness if there should be much infiltration of the sigmoid or of the rectum, yet it will often facilitate the diagnosis of early ascites, as I have elsewhere described. But here, again, the results are not absolutely conclusive.

The Pleximetric Resonance of Solid Viscera.

Organs usually recognized by their dulness may yield, wholly or in part, a resonant, nay a tympanitic note by playing the part of pleximeters to some contiguous resonant hollow viscus. Those which are entirely contained within the abdomen may still be recognized by palpation, but we are more liable to be misled in connection with those which are wholly intra-thoracic. The most frequent instances of this pleximetric condition occur in the organs adjacent to the stomach:

1. The spleen,
2. The left lobe of the liver, and
3. The heart.

A "boxy" spleen is not uncommon. As the note is almost always due to an inflated stomach (less often to inflation of the colon), very careful percussion of the costochrondal basic area is requisite. The anatomical particulars of this region I need not dwell upon again. The "boxy" character of the splenic area will be easily distinguished from the resonance which arises immediately from the stomach itself. My first experience of this peculiarity was in a case of typhoid fever. The derivation of the abnormal resonance having been realized, a determination of the size of the spleen by its "boxy" note became quite as easy as it might have been by means of the usual dulness, nay, easier. Since then the experience has often been repeated.

The left lobe of the liver is so frequently pleximetric that this might almost be regarded as one of its normal conditions. It was long ago

pointed out that this provides us with an easy means of defining the boundary between the cardiac and the hepatic areas—a determination which it is always possible to make even when the left lobe is dull owing to the stomach being charged or quite empty. Almost invariably this section of the liver dulness is at least modified in the direction of resonance owing to the vicinity of the stomach, and therefore in percussing the absolute hepatic dulness from the extreme right towards the left a change takes place from absolute to partial dulness at the epigastric notch. Often the resonance of the left lobe becomes marked, but the "boxy" tympanitic note mentioned in connection with the spleen is not produced; and, moreover, the influence does not spread to the entire organ. A universal "boxy" note is probably produced either when a solid organ, such as the spleen, is in complete contact with a resonant surface larger than itself; or when a large organ, such as the liver, forms part of the wall of a strictly limited gaseous collection, contained, as it were, in a box, and possessing some degree of tension. To this condition I have referred elsewhere. That belonging to the left lobe of the liver is usually different, the tension of the gases in the stomach not being sufficient to change its note to a tympanitic one.

On some Practical Points in Connection with Inspection, Palpation and Percussion of the Chest.

1. *Inspection.*

This is the simplest and the easiest of all our methods; and yet it rarely receives the attention which it deserves. All that you are required to do is to look and to see. Beyond this there is no technical refinement that I can suggest. That which you doubtless have already done well you should endeavor to do still better. Lend to this work the best use of your eyes, so keen and successful in matters of sport, and remember that in order to see everything that is to be seen you must look very intently. Make it an invariable rule to turn to the best advantage any light you can get. The first requisite for diagnosis in general, and the essence of inspection, is to place your patient in full and direct light. Attention to this may make all the difference in your future success as practitioners; and I can only repeat to you the advice which I once received from a great clinical master, the late Sir George Paget, "never stand in your own light."

Then as to sighting. It is hardly for me to teach you how to shoot. Apply the principle you know so well. Sighting patients' chests means raising and lowering your head to the level of the surface you wish to inspect. This implies a little trouble, but is worth it, as you will not fail to perceive from your improved results. In other words, the patient's position should govern your own.

1. *Sighting from above* is an excellent method when the patient is seated. As you stand behind the patient you command a view of the

front and of the back of the chest, and if the light is good you will detect any fine differences in shape and in movement. At the same time you will have an opportunity of noticing the configuration of the back and the sagittal diameter of the right and of the left side of the chest.

2. *Sighting from below* is easiest with the patient standing, when by bending the knees and looking up from the front you may get an excellent view, particularly when working with a top light. This performance is slightly trying for the observer, but you will think nothing of this inconvenience when in earnest to detect the indications which may decide in a difficult case as to the presence or absence of a severe disease, such as phthisis.

3. *Sighting from the side* presents no awkwardness where the patient is standing or sitting, and I need say no more about it.

4. *Horizontal sighting* is requisite where the patient is lying in bed. You have no choice but to stoop to the level of the object for inspection. This is the method which you will find most useful in the wards; it applies not only to the inspection of the chest, but to an examination of the abdominal viscera also. If you will only give sufficient attention to these practical measures you may soon outdo your teachers in the accuracy of your observations.

2. *Palpation.*

This large subject includes two great divisions, superficial and deep palpation.

1. *Superficial palpation.*—Here, again, in your advanced work you will find little to add to the elementary method which you have all practised; and the only suggestion I can offer refers to increased care and attention in its performance, so that you may learn to feel keenly. I would merely remind you of the advantage to be gained from an intelligent use of the different parts of the hand, the tactile appreciation of which is far from being uniform; but to this point I must refer later on.

Three distinct objects belong to superficial palpation:

i. Palpation for characters of surface.
ii. Palpation for vibrations.
iii. Palpation for movement.

Simple palpation is that which in the blind has to do duty for sight; with us it may be regarded as "supplementing" sight. The thickness and quality of the skin, its swellings, œdema, or loss of elasticity, its subcutaneous fat or nodules, any abnormal state of the muscles or superficial changes in the bones, or any malformation giving rise to irregular prominences or depressions of the thoracic skeleton, and in particular the rachitic deformities and the so-called "rosary"—all this falls within the scope of simple palpation, which also enables us to determine the situation of the ribs and of the costal arch, of the sternal notches, and of the xiphoid appendix. For its successful performance you should not depend

exclusively upon the tips of the fingers, but often use the flat of the hand as well.

Palpation for thrills is not always a purely passive operation. Some thrills are obvious, others need for their detection the "tactus eruditus." The hand must therefore be applied with a variety of pressures, or you may fail to perceive the finer thrills.

By applying the whole hand you bring into play all its sensitive areas, and particularly the thenar, the hypothenar, and the post-digital eminences of the palm. If the thrill be of large extent you will feel more of it; if small, as in the case of most heart thrills, its perception localized to a limited portion of the hand will be rendered more striking by contrast with the absence of any sensation of thrill from the rest of the palm.

When testing for *vocal fremitus* save time by using both hands, each hand being used for the corresponding side of the chest. By alternately applying and raising one hand, and then the other hand, you will at once detect any marked difference; but if necessary you may confirm your results by using the same hand in succession to each of the two sides.

In ascertaining the level of any change in the vocal fremitus the *ulnar border* of the palm is often useful; it is convenient both in respect of its shape and of its tactile sensitiveness. The flat of the hand having been applied to the surface to be examined, its outer border is gradually raised till the hand hinges on its ulnar border, and whilst the patient is still counting it may be, if necessary, brought down once more into full contact with the chest. The precise level at which the alteration in the vocal fremitus occurs can in that way be determined with accuracy.

Again, a careful graduation of the pressure of the hand is all-important for the detection of obscure pulsations, whether cardiac or aneurysmal, and for the latter when deep-seated, firm pressure is sometimes needed. Venous thrills, on the contrary, require very light pressure.

Palpation for movements should always be called to aid to confirm the results previously obtained by inspection. The diffused cardiac or aneurysmal impulses, the systolic movements communicated to the interspaces and to the ribs, as, for instance, to the twelfth rib, the cardiac systolic succession of the thoracic surface, etc., are instances in point.

Palpation has this advantage, that we can compare both sides simultaneously, whilst sight can only deal with them in succession, and, having to glance from one to the other, loses continuity of sensation. Another advantage is that by palpation we can to some extent influence and govern the respiratory movements, and thus assist our observation. In this connection I can recommend to you the following practical method.

Resisted Respiratory Movement.—A clear notion of the respiratory energy of the patient and of his available range of respiratory movement is an important element of diagnosis. Some patients are very shallow breathers whilst under examination, and we may be left in doubt as to their respiratory capacity. A definite conclusion may be arrived at by the bi-

manual application of combined palpation and pressure. One hand is placed on the back, below the scapula, the other on the pectoral region of the same side, and gentle but firm pressure is made by both hands during expiration, with a view to encouraging a complete emptying of the chest. At the end of expiration the pressure is relaxed slightly, and the patient is directed to inspire fully. Whilst he is drawing his breath the pressure is to be kept up, and its degree is to be carefully adjusted to the inspiratory effort which has been called forth by the resistance, the object being not to prevent the thoracic expansion, but to gauge the activity and the range of the full inspiration which is thus elicited. The mobility of the axillary regions is then tested in the same manner, by grasping between the hands the two sides of the chest. By this means you will be able, after a little practice, to distinguish functional laziness of respiration from the limitation of breathing which is due to structural disease.

2. *Deep palpation* is a method the full development of which we owe to Dr. Maguire. It had long been applied to the abdomen, but he has shown us that it may be applied to the thoracic organs as well, and that under favorable circumstances it may even be possible to determine by its means the boundaries of the viscera contained within the chest. I will now demonstrate to you in a patient whose heart has been displaced to an extent which I have not yet ascertained that this form of palpation can yield excellent results.[1]

This method is an odd one in many ways. It implies *deep* palpation, and this can only be carried out if the pressure be gentle and soft as well as firm. My advice would be that you should practice at first upon forgiving friends rather than upon your enemies. Select for your early attempts juvenile subjects with exceedingly pliable chests. With them you will get at the organs more readily than in larger chests with thick coverings of muscle or fat. As your touch becomes more educated and lighter it will be less resented; and you will acquire by degrees the delicacy of tactile feeling which is the essential point in this method.

3. *Percussion.*

There are a few technical points in percussion due attention to which makes all the difference between the apprentice and the artist. These include a full mastery of the light and of the heavy stroke, and their opportune employment where each of them is called for; an intelligent use of sufficient pressure with the left or pleximetric finger—this pressure also needing variation; a careful training of the ear as well as of the touch, upon which we depend for clear notions as to the results of percussion, and a due appreciation of the local anatomical peculiarities of the several parts of the chest.

[1] The case was one of cardiac displacement to the right, resulting from pleural adhesion and contraction of the lung. The boundary which was determined by deep palpation was found to coincide exactly with the tracing subsequently obtained by fine pleximetric percussion.

Single Stroke Percussion.

The sure sign of an experienced percussor is that he rarely gives a "double knock." If strokes must be repeated, a sufficient interval should intervene between them. The beginner, who is seldom satisfied with less than three or four, does not realize that the last stroke in a rapid series is the only one that can convey a definite impression to the ear. He should be warned against the habit, and reminded that one stroke instead of two on every occasion during a lifetime will mean a vast saving of time, of discomfort to his patients, and of damage to his own finger. A complete ex amination of the chest, even with single strokes, means many blows. In examining the back considerable strength has to be used by both hands, and it is here that the finger will suffer severely from any unnecessary rapping.

Freehand or Swinging Percussion from the Wrist and Elbow, and fine Percussion from the Wrist.

You will bear with me if I touch upon these and other elementary details which are fundamental. We never percuss from the shoulder unless suffering from an ankylosed elbow or a stiff wrist. The use of the elbow is combined with that of the wrist in rough percussion; but fine percussion is to be made exclusively from the wrist. The first method is the "swinging," "freehand" (or rather perhaps "freearm") percussion. The second is the fine "local" percussion—two totally distinct methods.

By the "swinging percussion" we draw the sound from as far and as wide as possible. Fine percussion carefully avoids doing this, and seeks to analyze the slightest local shades of resonance.

Freehand percussion from the wrist and elbow is therefore well suited for a preliminary exploration of the chest, particularly if apparently sound, and will be of use in rapidly detecting coarse changes, such as the presence of fluid or of considerable consolidation. For the detection of limited and slight changes *fine percussion*, to be practised exclusively from the wrist, is indispensable; and this is also essential for the correct mapping out of organs. The pleximeter is fortunately not much in favor in the schools, and finger percussion is therefore not deprived of the attention which it needs. But fine finger percussion is a much more difficult performance than the use of the pleximeter, and consequently for the purpose of practice, where definite results must be obtained rapidly, a pleximeter such as Sansom's is of special service. Since, as previously stated, it picks out and intensifies any slight dulness, no dulness escapes its investigation, and its shape is such that the outline of the dulness can be worked out to a small fraction of an inch, although this statement is often received with incredulity by those who have never acquired sufficient skill in the method. The fine finger percussion method affords us the possibility of so regulating the action of the percussing hand that the successive blows are uniform. The

weight of the hand being always the same, provided, of course, it be used passively, the rest is merely a question of length of "drop."

A good way to acquire the necessary skill is to practice percussion with the right elbow and forearm resting on the table, whilst the hand and wrist project beyond its edge. In this way an ample range of vertical movement of the wrist can be acquired. For the study of fine percussion the hand and wrist should be on the table, and the wrist should remain in contact with it.

On Factitious Percussion Notes and the Use of the Left Hand.

Two of you have just percussed the same spot on the patient's chest; the first percussion was almost inaudible, the second we have heard plainly. You should all endeavor to obtain a good, full-sounding percussion, and you may all succeed in doing so, for the whole secret lies in the use of the left hand.

It is possible to apply the left finger so firmly as to stifle vibrations, but the common mistake is the opposite one. Want of tone usually does not mean the lack in you of that quality described as "touch" in the pianist, but simply the neglect of that amount of pressure which is necessary to condense the media and render them more pleximetric. A well-adjusted pressure not only gives a louder sound, but favors also your perception of the tactile vibrations.

Factitious results are clearly, then, a possible fallacy. Since different pressures give so much difference in the note, everything would seem to depend upon the percussor. It must be confessed that such is the case. If sufficiently skilled he can manipulate the notes in a manner calculated to shake our faith in the method; and this is one of the reasons why each observer prefers to trust to his own percussion.

The best remedy against being misled into unconsciously manufactured results is to be alive to their possibility and to their mode of production: in other words, to acquire the necessary skill for producing them at will. When he has reached this stage the percussor is an expert, and his ability to produce deceptive effects is his best guarantee that he will not be himself deceived.

Direct Percussion as Applied to the Clavicle.

Direct or *immediate* percussion without the intervention of either pleximeter or finger, can only be applied to subcutaneous bony surfaces. Of these the chest presents but two, in addition to the spinous processes of the vertebræ, viz., the clavicle and the outer portions of the scapular spine; and the clavicle is the only one which is commonly percussed in this way. I shall devote to this subject my concluding remarks.

The clavicle belongs to those surfaces which I shall describe in my next lecture as the specialized percussion areas. The length and the elasticity of the clavicle are important peculiarities, but they are not the only ones.

This bone spans areas possessing very different percussion values between the highly resonant tracheal region and the exclusively solid masses at the tip of the shoulder, and it crosses only a small width of lung in its second sternal quarter. The left apex, as is well known, is even narrower than the right; in spite of this, however, there is in health a practical equality in the results of percussion of the right and of the left clavicle, but in both alike the general result of the variety in the underlying material is that no two spots in the clavicle afford the same note on percussion. It will be found by successive percussions conducted from the middle line to the shoulder, that as we proceed outwards the pitch of the note rapidly rises, and a fine ear will detect between the deep-toned tracheal percussion note of the sternal end and the high-pitched note of the shoulder end a considerable musical interval.

Obviously, then, no conclusions can be drawn from a comparative percussion of the right and of the left clavicle, unless this be conducted on both sides at exactly symmetrical spots. This suggests a method which is both reliable in diagnosis and practically useful—that of bilateral and alternating percussion with the right and left hand, the percussor standing exactly opposite the patient.

In this way the right and the left percussing finger can alternately sound identical segments of the two clavicles, and demonstrate any differences between them with the least expenditure of time. Proficiency will easily be acquired even by those who are not ambidextrous.

This same principle of symmetry in percussion is applicable elsewhere, but owing to the one-sided position of some of the thoracic organs it is applicable only to the upper front and back and to the axillary regions of the chest.

Since the apex of the lung underlies so small a proportion of the length of the clavicle, the percussion of its outer half might seem superfluous. Yet it is constantly practised, and not without profit, because on the one hand the clavicle is a pleximeter readily transmitting vibrations, and, on the other hand, its outer extremity is subject on both sides to identical dulling agencies, whereas its inner half is influenced by the strong resonance of the trachea, and by that of its divisions which are not symmetrical. It follows that any marked difference in the note obtained over the two outer halves will be a reliable source of information, although the condition producing the note is at a distance from the point percussed. Indeed, cases may be met with in which more definite information might be obtained from the percussion of the distant part of the clavicle than of that immediately above the lungs. A similar value attaches to the percussion of the outer part of the scapular spine, which is a long way external to the pulmonary apex.

REVIEW OF MEDICINE.

MEDICINE.

The Bacteriology of Progressive Cirrhosis of the Liver. (*The Lancet*, August 13, 1898.) By J. G. Adami, F.R.S. Edin.

In the course of an extended investigation into the Pictou (Nova Scotia) cattle disease undertaken in 1894 and 1895 on behalf of the Government of the Dominion of Canada, Adami discovered an exceedingly small micro-organism in the nature of a diplococcus in the livers and neighboring organs of cattle died of that disease. Since the most constant lesion in this disease is a singularly extensive cirrhosis of the liver he has examined microscopically the liver tissues in many bodies of persons died of hepatic cirrhosis with results which he thinks prove: 1. That in at least a very large number of well-marked cases of progressive cirrhosis in man there is to be found, largely within the liver cells and also in the lymph spaces in the newly formed connective tissue, a peculiar and very minute form of micro-organism, presenting on staining to the proper extent the form of a diplococcus surrounded by a faint halo or when stained deeply being a rather obscure ovoid bacterium, which may easily be mistaken for stained deposits within the cells. 2. That in the infective cirrhosis of cattle a very similar micro-organism is recognizable, present in like positions within the tissues and showing similar appearances when stained. He adds: 3. That from at least thirty cattle affected with this disease I have been able to isolate the micro-organism from the liver, bile, abdominal lymph glands, and in some cases from the various organs of the body. 4. That the micro-organism isolated from these cattle is a polymorphous micro-organism appearing as a small diplococcus when grown upon broth, and tends to assume a distinctly bacillary form when grown on solid media. 5. That this micro-organism is pathogenic for the animals of the laboratory, and that in them it is to be recognized within the hepatic cells as in other regions. 6. That from a case of distinct atrophic cirrhosis in the human being I have been able to isolate from various organs of the body a similar micro-organism, which, grown in broth, has a diplococcus form and, grown upon agar, is present as a short or longer bacillus according to the age of growth. Adami does not maintain that these organisms will be found in all cases of fibroid change in the liver and is not prepared to say that Hanot's cirrhosis affecting the young adult and presenting an enlarged liver with smooth surface and accompaning this, crises of icterus, is identical with the usual form of cirrhosis in adults; but believes that in cases of all persons over forty years of age affected with this disease his newly discovered diplococci will be found and inclines to the theory that this micro-organism has a causative relation to both cirrhosis in man and the Pictou cattle disease. BOARDMAN REED.

Rest—A Neglected Factor in the Treatment of Gastro-Intestinal Disorder. (*Jour. American Med. Ass.*, July 30, 1898.) By Dr. C. D. Spivak.

In this paper, which was read before the Section on Practice of Medicine at the last meeting of the American Medical Association, the author reasons that rest is quite as useful in the treatment of gastro-intestinal diseases or disturbances as in surgical or nervous affections and yet rarely employed. He describes three methods by which rest can be given the affected digestive organs: 1. Rest in bed. 2. Diet. 3. Hot poultices. These are thus explained: 1. *Rest in bed.*—In severe cases I follow the method of Weir-Mitchell to the letter: 1. Absolute rest in bed. Sitting is not allowed under any circumstances. The bowels are regulated; the bed pan is used. 2. Sponging the whole body every morning. 3. Isolation. 4. Massage. I have not had yet a case that required electricity. In milder cases I use my judgment as to isolation and massage. 2. *Diet.*—In many severe cases of gastro-intestinal disorders the best bill of fare is abstinence. One, two or even three days' fasting will do no harm in cases of ulcer, dyspepsias, and diarrhœas of all kinds and varieties. Nutritive enemata can be employed in cases where a longer period of fasting is necessary. When food by the mouth is allowed it must be given in small quantities, no matter whether liquid or solid, and at regular intervals. Every case must be individualized as to the quality and quantity of food. 3. *Poultices.*—I shall not attempt to formulate a theory as to the action of poultices. Whether the poultices hasten the expulsion of food from the stomach, as has been shown experimentally by Fleischer, or they cause the acceleration of the circulation of the blood in the abdominal viscera, is not yet definitely settled. I am certain, however, of one thing, and that is that, as they aid the peristaltic movements of the stomach, they make the patient feel comfortable and keep him warm and at rest. *The poultices take the place of splints.* In severe cases the poultices are applied constantly during the day for one and two weeks; in milder cases from four to eight hours daily. Spivak, after reporting nine cases in which this method produced prompt curative results, reaches the following conclusions as to the indications for it: 1. It is indicated in all dyspepsias, the underlying cause of which is a deranged nervous system. 2. It is indicated in all cases where abdominal pain is present. 3. In all cases of acute and chronic diarrhœa. 4. In hemorrhage from the stomach or intestines. 5. In all cases of movable or floating kidney. 6. In all tubercular cases suffering from disturbed digestion, be it stomach or intestine, and especially those that have a vacillating temperature record, and as there are but few cases of tuberculosis that do not suffer from some form of gastro-intestinal disorders, the rest cure is indicated in 50 per cent. of all cases of tuberculosis. Not only are they relieved from their annoying digestive symptoms, but their general condition markedly improves. 7. I have yet to learn of a disease of the gastro-intestinal tract where the rest treatment is contradicted.

BOARDMAN REED.

THERAPEUTICS.

Speedy Relief of Chorea by Bromate of Camphor. (*Le Progrès Medicale*, Budeaux, 3d Serie, T. VIII., No. 29.) By Drs. Bourneville and Katz.

The case was a girl thirteen years of age who, previous to illness, had always enjoyed good health, but was very nervous, having been under some strain from her studies, for which she had always shown great aptness. She grew to be irritable, clumsy and disagreeable, until finally one day she was taken with a spell in which she became blue, and in two days developed marked choreic movements, which gradually increased in severity until she had to be put to bed; her rest was disturbed, talking and swallowing were difficult. Upon examining the heart a systolic murmur was heard. All the other organs were normal. Camphor monobromate was given in 0.2 gram doses in capsules: starting with two a day and increasing one capsule every other day until nine were given. Such marked improvement was attained that in one week after the medicine had been given the patient was able to sit up. As the movements became less medicine was reduced and in about one month the patient was perfectly well. Cod-liver oil and syrup of the iodide of iron were also given in conjunction with exercise and proper hygiene. The case has been very carefully studied by the authors, and the family history is quite complete, the maternal side showing quite a nervous tendency. The mother had rheumatism at eighteen years of age, which, in their conclusions, they think may have a bearing upon the disease.

NEWCOMET.

Quinine and Urea Hydrochlorate in Malarial Fever. (*Philadelphia Polyclinic*, September 3, 1898.) By Dr. S. S. Cohen.

Further experience has confirmed Cohen's previously expressed view that the hydrochlorate of quinine and urea is extraordinarily efficacious in malarial conditions, no other salt of quinine being comparable with it in this respect. He has charts demonstrating that a single injection of 15 grains will control an intermittent fever for 6½ or 13 days. For hypodermatic use the drug is to be dissolved in a syringeful of sterilized water, and with proper precautions injected deeply into the subcutaneous tissues; not into the muscle, however. The liquid must not be allowed to drop on the skin, and the point of puncture should be painted with tincture of iodine or sealed with iodoform-collodion. In the absence of these precautions, sores, even nasty sloughs, may occur. When the care described is taken, however, Cohen has never seen any bad result. While the quantity and frequency of dosage must vary with the conditions of each case, the following general plan may serve as a guide: In severe cases, not urgent, a single injection of 10 or 15 grains may be given on admission, and the drug continued by the mouth in doses of 10 grains, night and morning, for a

week. In urgent cases, in pernicious malaria, and the like, the injections should be repeated more frequently, as the symptoms and progress of the case indicate. In ordinary mild, malarial fever, as seen in this latitude, 20 grains daily should be given by the mouth, in two capsules of 10 grains each, administered eight hours and four hours, respectively, before the time of the anticipated paroxysm. In quotidians the same plan should be followed daily for four days, that is, until four periods have passed without paroxysm, when 10 grains, daily, should be continued (with double dosage on the sixth and thirteenth days) for two weeks. After that, circumstances present will govern action. In tertians, the dose may be halved or omitted on the free days, and given in full on four successive chill-days. It is then to be continued as in quotidians. The referee can confirm Cohen's observations both as to the efficacy of the double salt given hypodermatically, especially in malarial cases complicated by an irritable stomach, and also as to the need of unusual caution in injecting it, having seen troublesome sores produced by it.

BOARDMAN REED.

SURGERY.

Some Fads and Fallacies of Modern Rectal Surgery. (*Louisville Journal of Surgery and Medicine*, July, 1898.) By Leon Strauss, M.D., St. Louis, Mo.

Strauss considers the fads under one head and the fallacies under another, for the reason that all fads are fallacies; but, fortunately, all fallacies are not fads. Of the modern fallacies of rectal surgery, the operation of torsion, or pressure massage, stands out in bold relief; in fact, it seems that the author has sounded all the depths and shoals of fallacies—namely, Manley's operation for internal hemorrhoids. He thus describes it: "Cocainization complete, the next and most vital step is complete and thorough anal dilatation. Without this being efficiently carried out, all else is a failure. But to be painless and safe it must be gradual and steady, or we will rupture the muscle and leave our patient incontinent. In chronic old cases, wherein, owing to malnutrition and interstitial changes in the sphincter, it has parted with its elasticity, laceration is very easy if we do not exercise caution. Thorough anal dilatation accomplishes two purposes of great importance. First, it opens widely the anal portal, and so paralyzes the levator ani that the lower fourth of the rectum (the part always implicated in hemorrhoids) prolapses through the open vent, when it can be most minutely inspected and radically treated. This, however, is of minor importance compared with the profound effects which dilatation produces on the rectal disease. It is not material whether the hemorrhoids belong to the inflamed, intensely itchy, or irritable type, this stretching exercises a most salutary influence on them. The third step in simple hemorrhoids will be the separate treatment of each tumor by forci-

ble pressure massage. Before this is commenced, the entire cluster should be wiped clean and dry, and then be freely mopped with the cocaine solution. Now each hemorrhoid is separately seized; first, put on a moderate but full stretch, then twisted, and finally so completely crushed that it is reduced to a pulp, and none of the investing tunics remain except the mucous membrane and its under-stratum of fibrous tissue. When this has been completed, the entire mass is again pressed up inside the sphincter, a suppository of opium introduced, a pad and bandage applied, when the patient is returned to bed. An active, but painless, inflammation follows, and, as a rule, within two or three weeks resorption and atrophy have so reduced the vascular masses that nothing now remains but their shrunken, diminutive stems." To this operation Strauss makes quite a number of objections: 1. Cocainization of the sphincters is impracticable for the reason that the amount of cocaine required to produce local anæsthesia so as to make the operation painless would endanger the patient's life. It is a well-established fact that the rectal reflexes are the last to go, even under a constitutional anæsthetic. The contention that the patient is more manageable is absurd. It does not accord with the experience of others. 2. The second step in operation and the most vital one is complete anal dilatation. The author says, "Without this being carried out efficiently, all else is a failure." Strauss agrees with him. Apart from this, as stated in objection first, it is the most difficult, tedious and dangerous proceeding when made without complete anæsthesia. The shock following complete divulsion is very considerable, and, unless there is some special contra-indication to the use of chloroform, it is not at all warranted. 3. Females are known to have comparatively weak sphincters and no amount of local cocainization can make complete divulsion a safe procedure. Complete divulsion is only safe when under complete anæsthesia. In the female, rupture of the sphincters is a much more disastrous accident than in the male, and makes a constitutional anæsthetic in females almost imperative. 4. The third step in the operation, complete crushing of tunics of the tumor, is a tedious, painful and dangerous operation. Tedious for the reason that the sphincters will resist to the last, and for the further reason that it takes quite a while to get any effect from cocaine. Painful, because it is next to impossible to produce local anæsthesia of the sphincters. Dangerous for several reasons, but chiefest among them is the complete crushing of all the tunics of the tumors. Those surgeons who do much rectal surgery know that the mucous membrane covering the pile tumor is much thickened and softer than normal mucous membrane and quite easily broken down. 5. The result of this operation has not been at all satisfactory. Any method of procedure which requires the bringing about of a condition over which we have no control is unsurgical, unscientific and dangerous. Certain it is we have no control over the inflammation set up in the torsion method any more than in the carbolic acid injection method. This is one of the catchy fads for the reason that it is an operation and no operation—that is to say,

there is no cutting, no constitutional anæsthetic. It appeals much to the laity. Outerbridge's operation for internal hemorrhoids, unlike Manley's, applies both to internal and external hemorrhoids. Excision is not by any means a new operation; some years ago Mr. Allingham called attention to this method of operating. He, however, used torsion instead of the continuous catgut suture. It did not then, nor will it now, become a popular operation, for the reason that simplicity in operative technique is the *sine qua non* to success. Strauss offers a number of objections to this operation. He quotes from the author as follows: "For practical purposes, in doing this operation, we may divide the cases into two varieties—1. Cases with only external 'tabs' or with the more frequent arrangement of three tumor-like masses just inside the sphincter ani, usually considered most suitable for clamp and cautery or ligature. These may be dealt with in the following way: Grasp with a pair of thumb-forceps, or insert the point of a tenaculum into the most prominent portion of the 'tab' or tumor. Make enough traction at right angles to the gut to clearly define the mass. Surround it with the blades of a pair of scissors (curved on the flat) pressed well into the muscles, and with one or two cuts the diseased tissue is removed. This will leave an elliptical raw surface the edges of which can now be united by a continuous catgut suture. Each distinct mass is amputated and sutured in the same way. 2. Those cases where the 'hemorrhoidal inch' is dilated are ordinarily considered as most successfully treated by Whitehead's method. These may be handled as follows: Having thoroughly dilated the sphincter, the hemorrhoidal ring will protrude from the anus. With a pair of thumb-forceps grasp a part of the mass, and with the curved scissors cut away a strip of mucous membrane and hemorrhoidal tissue down to the muscle, following the line of the muco-cutaneous junction all around the lumen of the gut. A second or third strip may be removed whenever the size of the mass necessitates. If external hemorrhoids ('tabs') are also present, in order to prevent recurrence in that region, pruritus and the numerous other discomforts usually following the operation as ordinarily done, a strip of skin down to the sphincter ani is removed in the same way. The free edges of the skin and mucous membrane are now brought together with a continuous catgut suture. A double stitch may be taken at two or three points in the circumference of the bowel to interrupt the sutures and thus avoid the necessity of tying. Owing to the rapidity with which the diseased tissue can be removed and the suturing accomplished, the slightest hemorrhage which occurs is at once controlled without the use of artery clamps or the necessity of ligating bleeding points. Should bleeding occur at any point immediately after suturing, an extra suture at that point will at once control it. If, during the removal of the mass, any vessel bleeds excessively, it can be quickly controlled by at once beginning the suture." Objection 1. Complete paralysis of the sphincter muscles is required to make the operation. As stated before, it is a dangerous thing to practise complete divul-

sion of these muscles in all cases. Incontinence of fæces would often result in consequence. The result would be more serious than the disease for which the operation was made. We often have patients whose general health is below par with lax sphincters. This is especially true of tubercular cases. The operation would not be warranted in such cases. Objection 2. It is a long and bloody operation, as we shall see: "Having dilated completely the sphincters, the hemorrhoidal ring will protrude from the anus. With a pair of thumb-forceps grasp a part of the mass, and with curved scissors cut away a strip of the mucous membrane and hemorrhoidal tissue down to the muscle. Even a second or third strip may be removed whenever the size of the mass necessitates." All this cutting takes time, and a very long time it is when your patient is bleeding most profusely. Objection 3. If union does not come by first intention pus may form, and the result may be anything but satisfactory, if not absolutely dangerous, because of the increased chances of sepsis. If the suture should give, because of rapid absorption or other cause, the wound must heal by granulation over a large surface. With the other approved methods no such result could happen.

PHILIP R. CLEAVER.

Rectal Fistula. (*Medical News*, November 21, 1896.) By Cooke.

The following important points should be observed: 1. A careful physical examination of the lungs as well as of the entire rectum is to be made in every case. 2. Pulmonary tuberculosis is not necessarily a contra-indication. 3. Do not put down the knife until certain that every sinus has been divided. 4. Remove all diseased tissue. Large wounds are not to be feared. 5. Caution: the sphincter is to be divided only once and at right angles. 6. Special attention is to be given to the mucous opening. 7. Invasion of the perineum must be avoided, especially in females. 8. Systematic antisepsis is necessary if good results are desired. 9. Care and patience are required in the after-treatment. Dressings are not to be left to the family nurse. 10. In the after-treatment two warnings are to be heeded: complaints of unusual pain by the patient and increase of the discharge. Either of these may mean the formation of a new abscess. 11. Hemorrhage and incontinence of fæces are the chief danger. Both are amenable to treatment and should not defer from the operation.

PHILIP R. CLEAVER.

Tuberculous Peritonitis. Laparotomy with Recovery. (*Gazette des Hopitaux*, No. 80, 1898.) By Dr. J. Brault.

The author reports two cases occurring in little girls, one aged three and a-half, the other five years. They both presented the classical symptoms of the disease, which he believes is very rare under six. It was upon the older one he operated. Her family history was tuberculous and there was some consolidation of both apices. The last two months her stomach

had become much distended and very painful. Operation under chloroform was undertaken for relief of pain and to verify the diagnosis; an incision above the umbilicus was made; the surface of the liver was found studded with tubercular foci, as were the intestines, which were partially covered by a false membrane and were matted together. A cavity had been formed by pseudo-membrane from which came a muddy colored serum, partly tinged with blood. After he explored this cavity carefully, broke it up as well as the adhesions between the bowels, wiped the surfaces clean (but did not wash out the abdominal cavity nor make any applications), and removed all the tubercular foci he could find by this process, he closed up the wound without drainage. The stitches were removed on the eighth day and afterward, owing to a slight fright, the wound gaped a little; but for this she would have made an uninterrupted recovery. He thinks this to be a perfect cure and not an arrest of this process.

NEWCOMET.

OBSTETRICS AND GYNECOLOGY.

Enucleation of Uterine Fibroids. (*The British Gynæcological Journal*, May, 1898.) By William Alexander, M.D.

Alexander holds that once a fibroid shows symptoms and signs the "life of the patient is spoiled." She becomes an invalid and her life is in danger from the numerous accidents and complications. Except where life is threatened or the condition of the woman is very wretched, the mutilating operations of hysterectomy and oöphorectomy seem too severe. If it should prove as safe to remove the tumors without the uterus and ovaries it would be much better surgery and in young women with small tumors it would be obligatory. The author's first enucleation operations were done by splitting down to the capsule; enucleating; controlling hemorrhage by transfixing the uterus, just below the point of enucleation, with a double silk ligature which is tightly ligated; packing the cavity left after enucleation with gauze dipped in Monsel's solution which is kept firm by tying over it the ends of the transfixation ligature; and finally the fixing of the peritoneum to the uterus just below the ligature and closing the wound. No slough or hemorrhage followed and the uterus gradually dropped back into the pelvic cavity. All the appendages and all the uterus but a small portion of the wall were left and only the tumor sacrificed. The disadvantages of this method of operating was the removal of a part of the uterine wall and the fact that it is only applicable to fibroids on the summit of the fundus. The present method of operating is as follows: A median abdominal incision is made, large enough to allow of the delivery of the tumor through it by pressure from below by an assistant's fingers in the vagina. The abdominal cavity is then closed off by packing around the tumor with sponges. A vertical incision is made in the uterine wall covering the tumor and it is enucleated through this incision by the

fingers and blunt dissector. All bleeding points are caught and ligated with catgut immediately. Several tumors may be thus removed through one incision. The resulting cavity is then packed with a strip of iodoform gauze, leaving one end emerging. The uterine incision is closed with numerous superficial and deep catgut sutures except where the gauze emerges. A single silkworm gut suture is passed through the uterine wall above the incision and through the entire thickness of the abdominal wall above and on each side of the abdominal incision, temporarily fixing the fundus to the abdominal wall. The abdominal incision is finally closed by through-and-through silkworm gut sutures and buried sutures in the peritoneal layer, leaving a small opening for the passage of the strip of gauze from the uterus. The wound is dressed with double cyanide gauze and salicylic cotton, the latter being changed as often as necessary in the first forty-eight hours. At the end of that time about a foot of the iodoform gauze is slowly and gently removed and the same amount daily until all has been removed. The retaining silkworm gut suture is removed at the end of fourteen days and the uterus allowed to drop back into the pelvis. In case the uterine cavity is opened a rubber drainage tube is passed all the way through from the abdominal wall into the vagina in addition to the packing and after the gauze is removed antiseptic lotions are syringed through this tube until the operation cavity has shrunk up and disappeared. Eleven cases are recorded with one death from operation but not directly due to the special character of the operation. Hemorrhage seems to be easily controlled and the uterus retained in proper position by this method. The chances seem against the return of the tumor because of the traumatism inflicted and the age of the patients upon whom this operation is usually performed. There is no reason why the uterus should not resume its normal functions after such an operation. This operation is not recommended as a panacea for fibroids, but in all cases where it can be safely and conveniently done it is the most desirable operation.

GIRVIN.

Floating Kidney in Women, Especially the Importance of Its Consideration for Obstetricians and Gynecologists. (*Monatschrift für Geburtshulfe u. Gynekologie*, January, 1898.) By C. Keller, of Berlin.

Essentially a disorder common to women, floating kidney excites great interest in the gynecologist, as it stands in close relation to the functions and disorders of the female genitalia. There is no satisfactory theory to account for its causation; a congenital tendency may exist, but so far no such condition has been discovered in autopsies upon infants. The symptoms usually become prominent between the twentieth and fortieth years. Many causes have been suggested for this late appearance; some acting upon the body from without, as traumatism, tight lacing, etc.; others depending upon changes within the body, as rapid emaciation, relaxation of ab-

dominal walls, etc. No one theory will account for all cases, but the elements of each individual case must be considered. A sudden traumatism may have loosened the suspensory apparatus of the kidney; compression of the lower thorax by corsets, tight lacing, heavy skirts may have stretched these supports gradually or the excessive action of the diaphragm due to chronic cough or constipation, or the lifting of heavy weights, may have exaggerated the normal respiratory displacement of the kidney to an abnormal degree. Counteracting the tendency to displacement is the general intra-abdominal pressure, and anything that tends to lessen this throws a greater strain upon the blood vessels and connective tissue holding the kidney in place and thus encourages an abnormal degree of mobility. Relaxation of the abdomen after childbirth is the most common cause of this diminution of pressure, therefore the most important prophylactic measure is the careful treatment of the woman during the puerperium. The removal of large abdominal tumors, producing the same effect as childbirth, the rapid absorption of the large deposits of fat usually found in the mesentery and beneath the peritoneum contribute to these displacements by decreasing the contents of the abdominal cavity and by loosening the attachments of the kidney through absorption of the peri-renal fat. In such cases the therapy is naturally an improvement in the general nutrition of the patient and the alleviation of the nervous symptoms. Keller does not believe in any direct causal connection between diseases of the female genitalia and movable kidney. The conditions are often found associated, but their simultaneous occurrence must be looked upon as due to a common cause or purely accidental. There is no complex of symptoms characteristic of movable kidney, nor is the distress always proportionate to the amount of displacement. There may be great discomfort, but there is usually nothing in the symptoms to point to the kidney rather than to other organs as the seat of the trouble. The location to which the pain is referred and the character and duration of the pain vary greatly. The diagnosis is possible only after the abnormal mobility of the organ has been shown by careful palpation. Phantom tumors, fibromata of abdominal wall, a movable spleen, tumors of the liver and gall bladder, of the stomach, duodenum, colon omentum, and even of the ovary and uterus may be mistaken for the displaced kidney, the recognition of which rests upon the shape, the presence of the hilum and the pulsation of the renal vessels. Most often the diagnosis must be made by exclusion. The differential diagnosis from tumors of the uterus and adnexa may be quite difficult when the displacement of the kidney is sufficient to allow it to descend into the pelvis or when it occupies that position congenitally, but as a rule it is not difficult when suspicion of the condition leads to careful examination. The treatment is entirely symptomatic. Though we may occasionally determine the cause, we can rarely cure the disease. The apparatus usually recommended is of little service in keeping the kidney in place and nephroraphy is too often followed by relapse. A strong light flexible binder

making pressure over the lower abdomen and supporting the relaxed abdominal muscles may give relief, or a truss with large abdominal pads may be tried. A cure can scarcely be expected, but sometimes such apparatus relieves the distress. The abdominal muscles should be strengthened by massage, faradization, etc., and the general health of the patient must be improved by tonics and careful hygiene. Nephroraphy may give temporary relief, but an early resumption of hard work is almost certain to cause a recurrence of the trouble. When the operation is done its effect should always be supplemented by the long continued use of a binder.

L. S. SMITH.

PEDIATRICS.

Empyema of Antrum in a Child Aged Eight Weeks. (*British Medical Journal*, September 25, 1897.) By D'Arcy Power, F.R.C.S. Eng.

The author reports a case of this condition in a boy aged eight weeks. On admission to the Victoria Hospital for children, he was found to have an abscess which had opened and was discharging at the lower part of the right lower eyelid. The right side of the face was fuller than the left. The skin of the lower eyelid and cheek was red and hot. Pressure over the cheek caused pus to flow from the opening. An examination of the mouth showed that a small quantity of pus exuded from the alveolar border of the upper jaw. A probe passed under the sinus in the cheek showed the upper part of the superior maxilla to be bare. Forceps had been used at birth and after delivery; both sides of the face were found badly bruised, the right more than the left. When one month old, the child had difficulty in closing his mouth and refused to nurse. At this time, the redness and swelling appeared beneath the right eye which finally culminated in an abscess. The child had not been exposed to any infectious disease. He was operated upon and died after ten days. The author calls attention to the extreme rarity of this condition in children. Only one case was found recorded in detail. This was a child aged two weeks. In this case, and in another undescribed case referred to by the same author, the child was born with the face towards the pubes and the condition was attributed to the pressure induced by the arch of the pubic bone against the face during labor. Watson refers to two cases in very young children which were supposed to be caused by pressure during labor.

S. McC. HAMILL.

Chronic Intestinal Indigestion.

In the course of an extended article upon this subject, S. Henry Dessau states that for children suffering from this complaint, all starchy foods, except in the most limited quantity, should be forbidden, unless one of the amylolytic ferments, as diastase or taka-diastase, is previously added. Coffee

and tea are to be condemned, also fats and sugars, except in the smallest amount. Meat will be found to agree better for a while until the digestive functions are restored, but it should be eaten in solid form, not as soup or extracts. Hydriatics in the form of warm wet packs, followed by a cold sponge douche of 60° F. to the spinal column and abdomen, with brisk friction are admirably indicated to promote oxidation of tissue and elimination of waste matter. Cold wet compressed to the abdomen followed by massage along the line of the colon, will be found a valuable aid in constipation of infants. Rectal irrigation with Kemp's tube and water at 110° F. is a most efficient means of relieving the attacks of abdominal pain. In infants the principal indication for the use of drugs will be to relieve constipation and flatulence. For this purpose calomel and bismuth are the only drugs worth considering. As an intestinal antiseptic, the bismuth may be given in the form of the subnitrate, subgallate, or beta-napthal bismuth. After dentition the author prefers the use of a tonic laxative, such as cinchona and nux vomica with senna or cascara sagrada.

LAB. J. LEAMY.

NEUROLOGY.

Brain Tumor. (*British Medical Journal*, July 16, 1898.)

A "symposium" on this subject took place in the Section of Neurology and Medical Jurisprudence at the recent meeting of the American Medical Association. C. H. Hughes (St. Louis) discussed the Symptomatology; F. Peterson, (New York), Localization: E. Jackson (Denver), Ocular Symptoms; P. C. Knapp (Boston), Treatment from the Neurological Aspect; and W. W. Keen (Philadelphia), Treatment from the Surgical Aspect. Hughes said that conditions of the intracerebral circulation, excited by or preceding the development of a neoplasm, glioma, or other growth within the brain, by a morbid cause projecting within it from the brain's enveloping membranes or bony covering, caused a symptomatology—cephalalgia, neuro-retinitis often, and sometimes glaucoma—that might exist independently of any form of intracerebral or intracranial morbid growth. Hysteria complicated, even as it was sometimes complicated by cerebral tumor. Altered cerebral circulatory states, especially of vasomotor origin, independent of intracranial growths, were not continuous as tumors were. Chief among the persisting signs were the ocular fundus and pupillary signs, the paralyses of cerebral source, monoplegias, hemiplegias, etc., monospasm, hemispasm, etc., tremors, epilepsy, vertigo, paralyses of sensory, motor, and special senses, incoördination, anæsthesia and pain due to regional or general cerebral irritation or pressure and degeneration due to intracranial pressure. Such a symptomatology opened the possibilities and consequences of cerebral sclerosis, athermatous, inflammatory, or specific vascular changes, emboli, thrombi, or thrombotic inflammation of vessels,

apopletic sequelæ, abscesses, interstitial nephritis, uræmic, alcoholic, or other toxipathies, involving the brain, its vessels, texture, or coverings, and serous, ventricular, or subarachnoid effusions. Insanity was often a marked symptom of tumors. Peterson presented several charts, one showing the localization of functions in the cortex, another showing the centers of language and the result of their lesions. Jackson referred to optic neuritis as the most striking and significant symptom of brain tumor occurring in 80 or 90 per cent. in all cases. It could not, however, be regarded as pathognomonic, and it was of little value in indicating the location of the tumor. The typical optic neuritis of brain tumor was characterized by great swelling, sometimes 10 or 12 D. (3 millimeters), abruptly limited, at no great distance from the margin of the disc; with arteries narrowed, veins dilated and very tortuous, and small vessels much enlarged, but not very numerous, because scattered through the swollen tissue; small flame-shaped hemorrhages upon or near the papilla; the other portions of the fundus, except for the alteration in the vessels, being normal or presenting changes that were in most cases slight as compared with those at the disc. In contrast, swelling and discoloration of the disc, occurring as an anomaly, were never of very high degree. Jackson also referred to optic atrophy, changes in the pupil, with impairment of accommodation, paresis of the extraocular muscles, nystagmus, impairment of central vision and limitation of the field of vision, and impairment of color perception. Knapp said that of 405 cases collected by him the growth in 34 was found but could not be removed; in 92 it was not found at the point of operation; and in 224 it was found, but in 34 of these it was of such a nature that it could not be wholly removed; in 55, or 14 per cent., the operation was palliative, and in some of these there was perhaps a mistake in diagnosis. He was not very sanguine as to the results of operation in cases of tumor, but he dwelt upon the advisability of operative procedure for gummata and tuberculous growths. The greatest danger was associated with sarcomata and gliomata, the likelihood of recurrence being especially marked. Keen referred to the difficulty of localization, and urged that every case of brain tumor be subjected to faradism during the operation before the tumor or the brain was touched. As to the technique of the operation, Keen advocated a very large opening, as giving a better opportunity to ascertain the location of the tumor.

PRACTICAL NOTES.

Treatment of Diarrhœa in Children by Sterilized Water.—Mongour (*Correspondenz-Blatt f. Schweiz Aerzte*, April, 1898) says that the intestines of infants suffering from gastro-enteritis contain in great numbers, and in a high degree of virulence, those bacteria which produce abnormal fermentations in the articles of food which they ingest. There are therefore two indications for treatment: first, to free the intestines as quickly as possible from the products of fermentation, and second, either to frequently change the contents, in which the bacteria develop, or else to keep these fluids in an aseptic condition. The first indication is secured by laxatives, but these cannot be many times repeated in the case of a weakened child. Asepsis of the intestine cannot with certainty be obtained. It is easy, however, to frequently renew the nourishment, although such children suffer more from lack of water than from lack of food. Moreover, water is one of the poorest media for the development of bacteria which it is safe to introduce into the stomach. The clinical results are in accord with this theory, and if a child is given from ten to twelve ounces of sterilized water daily vomiting will cease at once, diarrhœa will soon disappear, and the temperature will fall so that in a relatively short time milk can again be given. Absolutely no medicine will be required. Mongour has obtained most brilliant results from this simple treatment.—*Medical News.*

A New Method to Restore an Asphyxiated Child.—Stringer (*Vir. Med. Semimonthly*, May 13, 1898) calls attention to the fact that the asphyxiation of an infant after a difficult labor, being due to a lack of oxygen, may be overcome if the blood is kept oxygenerated, until the sensitiveness of the child is sufficiently restored to permit normal breathing to begin. He discovered quite by accident that this oxygenation may go on through the surface of the placenta if the latter is exposed to the air. Having had a miscarriage case at the fifth month, in which the fœtus, the membranes, and the placenta all came away together, he wrapped up the specimen with the intention of examining it the following morning. Great was his surprise to find several hours later that there was still a pulsation of the heart. Life had evidently been prolonged by the aëration of the blood, which took place through the placenta. Stringer has since had occasion to test this method in the case of several full-term children born asphyxiated, and has found it to work admirably. As such cases usually follow long and difficult labors, the placenta is already separated in whole or in part, so that its removal does not present any difficulty. It is to be removed as soon as possible, its surface washed and exposed to the air, when the child will live an indefinite time, as it did in the uterus, without

respiration. When respiration begins, which was not for twenty-five minutes in some of the cases, pulsation in the cord will cease, and it may be tied and cut.—*Medical News.*

Medical Hemorrhage.—Dr. Frederick J. Smith recently read an interesting paper on this subject before the Hunterian Society of London. Under this title he includes the following cases: All intracranial hemorrhages not due to violence; hemorrhages appearing from the mouth or nose, as "spitting or bringing up of blood;" epistaxis of youth or old age; bleeding from spongy gums or pharyngeal varicose veins; aneurysm of the aorta; hemorrhage from the lungs in bronchitis, pneumonia, phthisis, emphysema, malignant disease, etc.; hemorrhage from the stomach or duodenum; hemorrhages appearing from the anus either as blood or melæna, or in typhoid fever and other forms of ulceration—*e. g.*, tuberculous or dysenteric; gastric hemorrhage if not vomited; hemorrhage from piles, internal and external; hemorrhages appearing from the urethra, as blood in the urine; from bladder or kidney, from the vagina in women, metror rhagia, menorrhagia, or postpartum hemorrhage; and subcutaneously—purpura, idiopathic or rheumatic, etc., and scurvy. A mixed class of cases is due to serious disease—leucocythæmia, acute yellow atrophy of liver, some other forms of blood poisoning, and hæmophilia. This list, probably incomplete, is sufficient to show how important and frequent is that loss of blood which may be termed medical. After discussing the use of ergot (which he condemns in all arterial bleeding) and other agents generally used, Dr. Smith concludes his article with the four following propositions: (1) That most cases of medical hemorrhage cease spontaneously and are essentially not dangerous to life from loss of blood. (2) That active treatment by ice-bags and ergot frequently defeats its own purpose; if the bleeding ceases it does so in spite of treatment. (3) That where experience of morbid anatomy or the profuseness of the blood loss makes an arterial source certain ergot is distinctly contra-indicated. (4) That complete rest, opium and iodide of potassium are our most powerful and most trustworthy agents for the emergency, except in certain special cases—*e. g.*, from the stomach—where additional treatment by astringents should be applied.—*Lancet.*

The Treatment of Penetrating Wounds of the Abdomen.—Vulliet (*Rev. méd. de la Suisse Rom.*, June and July, 1897) has analyzed 335 cases of penetrating wounds of the abdomen, published since 1890. Of these 77 were treated by the expectant method and 258 by operation. From the study of these cases the writer has drawn the following conclusions:

1. Given a penetrating wound of the abdomen, whether from a stab or gunshot, the wound should be enlarged sufficiently to determine whether or not the peritoneal cavity has been entered. If penetration has occurred, exploratory laparotomy should be immediately performed.

2. The symptoms alone are insufficient to establish the presence or absence of perforation of the bowel.

3. Positive signs of perforation of the intestine, such as a fistula or appearance of the bullet per rectum are very rare.

4. Exploratory laparotomy does not involve any danger.

5. Statistics as well as experiments on animals show that spontaneous healing of intestinal perforations without septic peritonitis rarely occurs.

6. By prompt operative interference, instead of waiting for symptoms, the surgeon tries to prevent the occurrence of peritonitis; the latter being usually fatal, operation after its onset is generally of no avail.

7. Deaths caused by the gravity of the lesions should not be ascribed to the operation, long and difficult though it be. It certainly has saved many a life that would have been surely lost without operation. There has been considerable improvement of late in the results obtained from laparotomy.

8. If a patient has not developed abdominal symptoms when seen first forty-eight hours after the infliction of the wound, it may be assumed almost with certainty that no perforation of the intestine has occurred. If symptoms of peritonitis are present, there is but one chance of recovery left, namely, abdominal section and washing out of the abdominal cavity. Deaths in such cases are the result of expectant treatment and not of operation.

9. One should not hesitate to operate in the presence of shock for the reason that a severe shock is more likely to be due to hemorrhage which can only be controlled by operation. Stimulants and intravenous saline injections should be resorted to freely.

10. As a rule the incision should be in the median line and long enough to make the exploration easy and rapid. The abdominal cavity should be washed out and drained.

11. The author believes that the above conclusions apply only to civil life, the conditions which render antiseptic precautions possible. In war the experience is still insufficient to make it possible to decide whether an operation or expectant treatment is preferable.—*American Medico-Surgical Bulletin.*

The Use of the Catheter in Cases of Prostatic Disease.—Bangs (*Med. News*, February 12, 1898) in a paper on catheter life, with some remarks on the etiology of hypertrophy of the prostate gland, lays down some general directions on catheterism which should, it is held, be rigidly followed by the patient. The soft catheter with solid tip is the best to use if possible. If a rigid one be required, one made of elastic webbing, with a curve or bend at the point, is preferable. A new catheter must be treated with the same care as to cleanliness and asepsis as one that has been in use. If possible, it should be exposed to the vapor of formaldehyde; if not, it should be immersed in a solution of formalin (one to

two per cent.) during at least fifteen minutes. Then it should be placed in a strip of bichloride gauze, or placed between the folds of a perfectly clean towel. Each catheter should be kept in a separate receptacle or closed drawer, where dust cannot find access to it, and where it cannot be handled except by the person who is to use it. If the patient must carry the instrument about with him it should be kept wrapped in several layers of bichloride gauze, and outside of this should be placed a wrapping of "waxed" or parchment paper, held firmly by rubber bands. Just before using the catheter the patient must thoroughly clean his hands, and rinse his fingers in pure alcohol. In the meantime the catheter should be lying in formalin solution. Then, after shaking it, and wiping off any drops that may remain upon it with a piece of clean gauze, and smearing it with a proper lubricant, the patient should gently pass it along the urethra. Immediately after use the catheter should be thoroughly washed with soap and water, be steeped for a time in the solution of formalin, and then carefully put away in gauze or clean towel in readiness for the next use.—*British Medical Journal.*

The Treatment of Gastric Ulcer by Large Doses of Bismuth.—Gastric ulcer has been treated by very many methods, some of which radically differ from one another, and the use of bismuth in this affection is by no means recent. Within the last few years, however, it has been suggested by Fleiner that good results follow the use of massive doses of this substance. This clinician employed as much as 300 to 450 grains of bismuth in suspension in water, poured into the stomach by means of a stomach-tube after previous lavage, and in his paper he referred to the experiments of Mattheys upon the action of bismuth in hastening the cure of experimentally produced ulcers in the stomachs of dogs.

At a recent meeting of the Manchester Therapeutical Society, Dreschfeld read a paper upon this subject in which he protested against the use of the stomach-tube as a method of administering these large doses of bismuth, on the ground that it is not wise to pass a tube into an ulcerated stomach. He stated that he had employed from thirty to fifty grains of bismuth subnitrate three times a day, suspended in water, and swallowed without the aid of a tube. Under these circumstances he found the condition rapidly relieved, vomiting ceased and digestion improved, although he allowed light nitrogenous food, such as fish or fowl, to be given. Ultimately the ulcer healed. These large doses of bismuth have never, in his experience, produced constipation, but rather a slight tendency to pain and diarrhœa. Dreschfeld has also found this method useful in both acute and chronic cases, and also in acid dyspepsia with neurasthenic condition.—*Therapeutic Gazette.*

Colitis.—In the *Birmingham Medical Review* for January, 1898, Arthur Foxwell, in writing of colitis, has the following ideas to convey as

to treatment. He says when you feel any certainty that you are dealing with a specific poison, then no doubt a specific remedy should be employed and chiefly depended upon. In acute dysentery, ipecacuanha has a specific value, and according to Kanthack and Caddy, the deëmetinized drug gives as good results as that retaining the emetin, whilst the painful depression and nausea of emetin is avoided. But even with amœbic dysentery, ipecacuanha is by no means universally used. The French surgeons use it apparently chiefly for its emetic qualities and not as a specific. Bretonneau advised large doses of salines, whilst Leahy, of Hyderabad, saturates seven fluid ounces of water with sulphate of magnesia, to the solution adds one ounce of dilute sulphuric acid, and gives half an ounce of the mixture every one or two hours. He says he thus treated ninety-five consecutive cases with only three deaths, and two of these three were brought to him moribund.

If there be no evidence of specific infection, then a good plan is the following: Administer a powder of morphine $\frac{1}{12}$ grain, hydrargyri subchloridi $\frac{1}{6}$ grain, every two hours by the mouth. By the bowel give every hour a two-pint simple enema, containing two ounces of boracic acid; this will soon be returned, and after its return give a pint enema of starch containing ten drops of laudanum. As nourishment, small quantities of brandy mixture every hour, with plenty of bland liquid and frequent ounce doses of well cooked sago, arrowroot, or custard. If there be much pyrexia or any localized abdominal tenderness, then ten to thirty leeches over the tender spots will be efficacious in relieving pain, pyrexia and diarrhœa. Constant hot fomentations to the abdomen no doubt ease the pain. As far as possible there should be complete rest in bed. In the chronic stage liquid, bland, unstimulating food should alone be taken; skim milk acts excellently. Calomel, rhubarb, or other hepatic stimulant should be taken frequently in small doses, for there is a great tendency to congestion of the liver, probably from toxic absorption. The bowels should be kept open daily; for this purpose a drug which increases peristalsis is the most useful. The writer has obtained the best results with cascara and belladonna. Even in the chronic non-amœbic varieties, he has found moderate doses of deemetinized ipecacuanha of considerable service, given thrice daily for a week at a time. But persistent antiseptic enemata with occasional injections of nitrate of silver, sixty grains to the pint, is the treatment which seems most rational, and that which has proved most successful.

Massage of the abdomen, though it has soothed pain, has not in the author's hands had much curative effect. Both it and enemata are liable to produce perforation if roughly administered. Lying out-of-doors on a couch for most of the day is perhaps the most excellent of all methods of cure, and if the patient be warmly clothed with flannel, it is quite without danger.

But whatever be done, colitis is a very stubborn disease, just as is its congener appendicitis. Both are sadly given to relapse, and with each re-

lapse we are confronted with the danger of perforation. Unfortunately, as we now think, we cannot remove the colon as we can the appendix. However, this may not be an unmixed evil, for the after-history of the amputated appendix has yet to be written.

The writer is not at all sure whether it would not be wisest, as soon as a case has become chronic, to do a right colotomy both for the purpose of relieving the colon of fœcal irritation and, more important, to enable astringents and antiseptics to be thoroughly applied to it. This treatment has already been suggested and successfully carried out by Mr. Mayo Robson. The writer doubts if it is ever of much value to do it for late obstruction or peritonitis; the gut is then too deeply and extensively diseased for any curative treatment; the result, at the best, can only be the annihilation of the large intestine and the formation of an artificial anus in the right inguinal region; but even this is little more than a pious aspiration, for five feet of deeply ulcerated and often sloughing intestine is not likely to lie encircling the belly in placid effacement.

Performed at an early stage and well followed up with persistent cleansing and stimulation, this method of treatment holds out great prospect of cure. For this early performance we want absolute certainty of diagnosis, which is often most difficult or impossible to attain; further, we require to know the degree of the lesions already inflicted—a still more arduous task. Unless we know these two things we cannot with any confidence reassure the patient as to the temporary character of the artificial anus, and if we are unable to do this we can scarcely wonder at his refusing to suffer so grave and disgusting a mutilation.—*Therapeutic Gazette.*

Tincture of Myrrh in Diphtheria.—Dr. Ströll, writing in the *Allgemeine Medicinische Central-Zeitung*, very strongly recommends tincture of myrrh in dyphtheria. The mixture he uses is composed of tincture of myrrh 4 parts, glycerine 8 parts, and distilled water to 200 parts. This is given very frequently—every hour or even every half hour in the daytime and every two hours at night, infants up to the age of two taking a large teaspoonful (seventy-five minims), older children double that quantity, and adults three times as much. This is continued until the membrane has nearly disappeared, when the doses are only given every two hours. After all the membrane has gone the treatment is continued for a couple of days, the interval between the doses being increased to three hours. This, of course, is with the view of preventing any recurrence. Usually the fever and lassitude disappear in twenty-four hours, so that a child may frequently be found within that time sitting up in bed playing. He says that there does not seem to be any need for local treatment, but in the case of older children and adults a gargle containing one-half per cent. resorcin may be employed every hour or oftener in the daytime, and where it is desired the tonsils may be painted every hour with the tincture of myrrh undiluted. Where the larynx is involved Dr. Ströll prescribes the

myrrh and glycerine mixture in an inhaler or spray to be used every half hour. By the employment of this method Dr. Ströll states that he has only lost one case out of eighty, and he has collected reports from several other practitioners in various parts of the world who have treated altogether 182 cases with 22 deaths. No mention, however, is made in his own or in the other cases of bacteriological verification of the diagnoses. The *rationale* of the efficacy of myrrh is supposed to be that this drug increases the phagocytic elements in the tonsils.—*The Lancet.*

A Simple and Accurate Method of Testing Diastatic Substances.—In an article on this subject in the March number of the *American Journal of Pharmacy* Mr. Jokichi Takamine, of Baltimore, alludes to the various methods known for determining the diastatic power of various substances, such as Lintner's, Junk's and others, and remarks that, while some of them are very reliable, in many respects they are complicated, and require specially trained hands to get reliable results, and that they are not, therefore, applicable when quick, simple and accurate testing is desired, as, for instance, in diagnosticating a certain form of amylolytic dyspepsia by determining the diastatic power of the patient's saliva. His proposed test method, he says, is based upon the stable diastatic property of taka-diastase.

It is generally known, and it is his own experience also, the author continues, that the isolated diastase prepared from malt or from the precipitated principle of saliva known in the market as pytalin loses its diastatic power by standing. Therefore, when the diastatic power of any substance is to be determined, it is necessary each time to go through the long process of determining the quantity of sugars formed by its action on starch (Lintner's method), or else measure the length of time required to convert the given quantity of starch into sugar (Junk's method). While these processes have valuable merits of their own, yet they have the disadvantage of being rather complicated for quick, everyday work. In carrying out the author's proposed method, a quantity of taka-diastase is tested by either of the methods mentioned above, and its exact diastatic power determined once for all. This power may be expressed as, say, three hundred Lintner's units, or it may be expressed as converting one hundred times its own weight of dry starch into sugar in ten minutes; or, a still simpler plan is to obtain a supply of standardized taka-diastase, which is especially prepared for such purposes by the manufacturer.

The standardized taka-diastase having been obtained, the diastatic power of any substance under examination is now compared with it, and the result can be expressed either in Lintner's or Junk's terms, or by any other standard method that may be agreed upon. It is highly desirable, the author states, that one standard method should be adopted for determining the diastatic power, and, whatever that may be, the following comparative test will be found useful. The solutions are prepared first as follows:

Standard Taka-diastase Solution.—Dissolve fifteen grains of standardized taka-diastase solution in 100 cc. of water; this solution ought to be made fresh every day.

Starch Solution.—Make a five-per-cent. solution of neutral potato starch, by boiling 800 cc. of distilled water in a suitable wide mouth vessel; pour into it milk of starch, made by stirring 750 grains of starch into 200 cc. of cold water, and boil two minutes.

Iodine Solution.—Place 15 grains of iodine and 30 grains of potassium iodide in a flask, add a little water, say 5 cc., agitate until dissolved, and dilute to 120 cc.; or dilute 50 cc. tincture of iodine, U. S. P., with 50 cc. of water containing 38 grains of potassium iodide.

Apparatus required.—One quart agate-ware kettle; one shallow tin pan, two inches deep, eight inches in diameter; two one-cubic-centimeter pipettes graduated to tenths; eight large glasses or tumblers of about 150 cc. capacity each; ten small test tubes; one 100 cc. cylinder; two white dinner plates.

Process of testing.—Pour into each of the eight glasses 100 cc. of the hot starch paste. Place them side by side in the shallow pan of warm water at about 104° F. Measure into the first glass 1 cc. of the saliva or other liquid to be tested. Pour, of the standard diastase solution, in quick succession, into the second glass, 1 cc.; into the third glass, 2 cc.; into the fourth glass, 3 cc.; into the fifth glass, 4 cc.; into the sixth glass, 5 cc.; into the seventh glass, 6 cc.; into the eight glass, 7 cc.

Then the contents of each glass are stirred with the test tube as a stirring rod in quick succession, until all the starch paste becomes limpid. At this stage it will be observed that the stronger the diastatic power the quicker the liquefaction of the paste. When the contents of the glasses become liquefied, take out of each glass in succession a drop of the liquid by means of the stirring test tube, and drop on a white, dry dinner plate in the order of the glasses. When there are eight drops of equal size on the plate, drop on each one drop of the iodine solution. Then spread each sample with the finger to about the size of a silver dollar. The drops from the second to the eighth glass will form a colorimetric scale from blue to purple and reddish-brown. Observe now which member of the scale corresponds to the color of the one containing the saliva. The comparison is made more certain by repeating the tests within the first ten minutes after the saliva is put in.

Suppose the color corresponds to somewhere between the fourth and fifth, then we can assume it at 4.5, and calculate the diastatic strength in terms of starch converted or sugar formed; or, if further accuracy of the test is desired, a scale of starch glasses containing standard diastase solution of 4 cc., 4.2 cc., 4.4 cc., 4.6 cc., 4.8 cc. and 5 cc. may be put up and compared with 1 cc. of the given saliva in the same manner.

Practising physicians, says the author, can apply this test in determining the diastatic power of different diastatic preparations that they intend

to prescribe, thus enabling them to reject those preparations which have diastatic power in name only. The size of the dose also can be regulated according to the amount of diastase it contains as well as the diastatic power of the patient.

The following modified method is given by the author, who considers it more convenient when great accuracy is not required: Into each of a dozen test tubes of about twenty cubic centimeters' capacity pour slowly from a graduated pipette fifteen cubic centimeters of water. Make a file mark on the tubes for that quantity. After draining the water from the tubes, fill each one up to the mark with the starch paste while it is hot. Several dozen test tubes may be filled with starch at a time, as it will keep at least for two days.

These tubes are put in a row on a stand, and into the first tube a given number of drops of the substance to be tested is added. In the case of saliva or malt extract it is better to dilute with a given quantity of water in order to make it easier to count the drops. Into the second and succeeding tubes add increasing numbers of drops of the taka-diastase solution. Then shake the several tubes vigorously in quick succession. When the contents of each tube are liquefied take out of each one with a rubber-headed dropper one drop and put it on the white plate in the order of the tubes shaken; than carry out the iodine test in the same manner mentioned before. By selecting droppers with uniform tips a fairly accurate result can be obtained which will answer for most practical purposes.—*New York Medical Journal.*

The Treatment of Serous Exudations in the Pleural Cavity by the Salicylate of Sodium.—In a recent issue of the *Archives Russes de Pathologie* Poliakoff insists very emphatically upon the utility of the salicylate of sodium in the treatment of pleural effusions. He has never seen disagreeable symptoms produced by the administration of the drug under these circumstances, and recommends that it be given in cachet, and immediately after ingestion of the cachet that the patient take a drink of some alkaline water. Should the dose of the salicylate seem to depress the heart, this may be avoided by the simultaneous use of a little caffein. After the salicylate has been administered for three or four days its use is suspended for a day or two, and it is then renewed.

It would seem from Poliakoff's studies that the salicylate is particularly useful in chronic apyretic pleurisy. He records six cases in which this treatment was used. In five of these cases the salicylate produced results which were exceedingly satisfactory.—*The Therapeutic Gazette.*

Euchinine in Malaria.—Dr. St. George Gray, writing from St. Lucia, West Indies, states (*British Medical Journal*, February 26th) that he has found euchinine highly satisfactory in the treatment of suitable cases of malarial fevers. He has found, however, that it does produce cincho-

nism, notwithstanding published statements to the contrary, for he has seen it cause tinnitus aurium, deafness and derangement of vision and sensation in an even more marked degree than the same quantity of quinine itself.

Contrary to the statement of Professor von Noorden, that fifteen grains of quinine are equal to twenty-five or thirty grains of euchinine, Dr. Gray finds that euchinine is a more powerful antipyretic than quinine, and that, in malarial fever at least, ten to fifteen grains of euchinine are as efficacious as twenty to twenty-five or thirty grains of quinine sulphate, and that it nearly always, in doses of twelve to fifteen grains, causes buzzing in the ears, if not other symptoms of cinchonism. The largest dose that he has given has been fifteen grains once or twice a day, always commencing with a good purge, which he considers essential in the treatment of all malarial fevers. This is sufficient in most cases, following the treatment with tonics and change of air if possible after the temperature has remained normal for a few days. Dr. Gray summarizes the conclusions reached by him as follows:

1. Euchinine is as effective as quinine in malarial fever.
2. It causes cinchonism.
3. It is tasteless, therefore easily administered; this is its great advantage over quinine.

The readiest form of administering euchinine is the simple powder placed dry on the tongue and washed down by a little water. As it is very bulky, some patients prefer it in cachets; but all solutions of euchinine that I have seen are decidedly bitter, presenting no advantage whatever over quinine.

[I do not consider cinchonism such a fatal objection as the intensely bitter taste of quinine. My experience with malarial fevers is that quinine and the malarial poison being antidotes to one another, cinchonism is a sign that a sufficient quantity has been taken to overcome its antagonist, the malarial poison, as mercurialism is the sign that the syphilitic poison is under control.]

If euchinine can be proved to be even nearly as effectual as quinine its reputed tastelessness alone should recommend it to many as a substitute notwithstanding that it is not altogether free from some of the other objections to quinine.—*The American Therapist.*

The Treatment of Pneumonia.—De Renzi (*Gaz. degli Osped. e delle Clin.*, February 13, 1898) advises the frequent use of a mouth wash of sublimate solution (1 in 5,000) or ac. salicylic. (1 in 500) both as a prophylactic and as a germicide, killing the pneumococcus which is frequently found in the mouth. He dwells on the importance of fresh and pure air, and on the necessity of feeding, relying chiefly on milk and eggs, broths having certain disadvantages. As to drugs, the only one recognized by him is alcohol (ethylic), which he is in the habit of giving to all his cases. Since the introduction of the antipneumonic serum (prepared by

Pane), he has used it with very gratifying results. During the last three years he has used the serum in 32 cases (and in the earlier years only the severest cases were selected; in the last year all the cases (14) were treated with serum), with a mortality of 9 per cent., whereas in the previous years with the ordinary treatment in vogue, the mortality was 24 per cent. No bad results have followed injection, and in one case as much as 200 c.cm. was injected in the course of twenty-four hours. The most marked effect was the lowering of the temperature. Of the three fatal cases, two were admitted almost moribund, and the third had serious concomitant disease. —*British Medical Journal.*

Headache.—M. Benedikt (*Wiener Klinik*, March, 1898) first refers to the different forms of pain as they affect various nerves. 1. Pains which appear and disappear suddenly, and are due to disease of nerve roots or their immediate prolongations into the central nervous system. 2. Pains which begin gradually and increase by exacerbations, and finally diminish. This is followed by an interval entirely or nearly free from pain. This form is due to a lesion of the nerve plexus or the nerve trunk. 3. The pains are less variable, of more or less long duration, and due to lesions of the nerve termination. As regards the sensory nerves of the head, pains may be observed in the trigeminal and occipital nerves, and in the upper cervical plexus. Shooting pains may occur in the fifth nerve, but the pains more often present the characters belonging to the third group. Migraine is a peculiar form of headache. It is remarkable that pains may occur in local brain disease, and especially tumors, which have all the characters of those due to lesions of the meninges or bones. These pains have not an eccentric character, because they are not directly due to the focal lesion, that is, that the nerves apparently affected do not spring necessarily from the diseased portions of the brain. The author looks upon the view which would assign these pains to intracranial pressure as untenable. He says that every abnormal irritation within the brain has a corresponding area of irritation of the skull. He relates a case of a small tumor in the brain, in which the symptoms, and also the other morbid lesions found, could not have been due to intracranial pressure. In regard to treatment, Benedikt looks upon the iodides as the most valuable remedies in neuralgia, and he thinks little of the many anodyne agents more or less recently introduced. Electrical treatment is the next most valuable method, and then *points de feu.* In the latter case the wounds are kept open by an irritating ointment. This cannot be done in trigeminal neuralgia, and the author looks upon the operative treatment as being the best, the success being due to the mechanical effect of tearing, etc., applied to the nerve. Bloodless stretching is also recommended in some other neuralgias. Anæmia, syphilis, albuminuria, of course require treatment. The author says that the electrical treatment of migraine is the best, and he even speaks of hypnosis here. Sodium iodide has a favorable action. The pains

due to organic brain disease, and especially tumor, since they are not directly focal symptoms, may be influenced by measures not necessarily addressed to the original disease. Hence the iodides and mercury may be useful in nonsyphilitic cases. *Points de feu* may also be valuable. Benedikt thinks that any palliative results which may follow upon trephining are merely due to revulsion.—*British Medical Journal.*

The Administration of Anæsthetics.—Upon this topic, one of cardinal importance to every practitioner of medicine, there have lately appeared in the London *Lancet* three lectures delivered by Frederic Hewitt, based generally on a wide experience as an anæsthetist, particularly on 6,657 administrations of anæsthetics conducted at the London Hospital during the year 1897. On the first of that year Hewitt adopted a system of recording the cases of anæsthesia, providing books and special tabular forms so that every instance of the administration of the narcotic in any part of the hospital could be properly noted. It is interesting to observe that out of the total number of cases nearly 3,000 were of ether and more than 1,000 of nitrous oxide. Chloroform was relied on solely in 677 cases, the A. C. E. mixture in 510, ether followed by chloroform in 293, nitrous oxide and oxygen in 240, and other successions in the majority of the cases unaccounted for. It will be noted that Hewitt has not confined himself to any particular method, but has had a sufficient clinical experience to speak with authority upon nearly all the combinations in common use.

As to chloroform, he states that within a few years it was the anæsthetic in routine use, but that confidence in it has been shaken by experience. He particularly warns against the employment of certain recently devised chloroform inhalers. He states that for giving chloroform in the ordinary routine way there is nothing better than Skinner's mask.

Referring to the general effect of chloroform as an anæsthetic, Hewitt states that, other things being equal, the stronger the patient the greater the trouble in giving the anæsthetic. Deaths from chloroform are the most common in the middle period of life, when men are most vigorous, and more men die than women under this anæsthetic. The drug is most lethal during the early stage of its administration, and a very large proportion of the accidents have occurred in connection with minor operations, which are most common in vigorous subjects. The explanation of this is dependent upon the fact that during the transient, very imperfect anæsthesia, the muscular system is thrown into a condition of spasm, most marked in the most powerfully developed.

Hill and Barnard state that deaths which take place comparatively early in chloroform administration are usually due primarily to rigidity, struggling, and holding the breath; secondarily to a considerable quantity of the anæsthetic being taken in during the succeeding respirations so that the right heart, already overfull, is paralyzed by the chloroform carried directly to it.

Referring to the practical administration of chloroform, Hewitt states that every breath should be heard or felt, that watching the chest or abdomen is a fallacious guide, and that it is of paramount importance to avoid all obstructions to breathing, except a very minor degree recognized by a softly snoring sound. In patients with perfectly free respiratory passages, and often following a phase of respiratory excitement, a condition of tranquil or almost imperceptible breathing may arise quite independently of the overdose of the agent. It indicates partial or moderate anæsthesia and is of particular importance, because it is liable to lead to pallor and pulse feebleness, probably because the heart of the chloroformed patient is less able to meet the strain thrown upon it by the occurrence of feeble respiratory action than the heart of the patient under ether. Hence, this type of respiration should be avoided, and a moderately snoring respiration when once induced should be maintained by the fairly free use of the agent.

Hewitt states that if snoring has never come on, or is allowed to disappear, it is a good plan to artificially induce it by gently pushing the lower jaw backwards. The results are that the breathing at once increases in force and circulatory depression is averted. In regard to the pulse Hewitt stated he was at a loss to understand the views of the Hyderabad Commission as to the desirability of systematically disregarding its condition until he saw Surgeon-Lieutenant Lawrie administer chloroform in his hospital. He noted that the anæsthesia with which he worked was not so profound as that commonly induced in England, the conjunctival reflex being rarely abolished. Under such circumstances watching the pulse is evidently unnecessary; indeed, its indices may be distinctly misleading, as, for instance, its condition just before vomiting, when the feebleness will be construed by the inexperienced anæsthetist as showing that the anæsthetic should be removed, whereas it should really be pushed. When chloroform is pushed to its full surgical limit the pulse should be carefully watched. Arterial tension falls. A certain degree of pallor and a slow and rather feeble pulse are not necessarily indicative of danger; this condition often precedes respiratory failure and enables the anæsthetist to avoid this later and more serious complication.

Hewitt states that there is much to be said in favor of the use of ether and chloroform in succession. The stage of rigidity and excitement, which is the dangerous stage in chloroform, is safely passed over under the stimulant effects of ether. Having secured a proper degree of ether anæsthesia, chloroform may be substituted, and there will result a better type of chloroform anæsthesia than if this drug had been given from the beginning.

Hewitt has adopted this principle for several years and is able to use chloroform without the occurrence of those untoward symptoms which are bound to occasionally arise when this agent is given from the commencement of the administration. He regards this development in our methods as one of the most important of recent years. It is especially indicated

when ether causes cough, embarrassed breathing, or the secretion of much mucus, or when the operation is likely to be a protracted one. Some practice is needed to know when and how to effect the change. The rule to be followed is that there should always be some evidence of the patient having emerged from ether anæsthesia when the chloroform is applied. As a rule the conjunctival reflex should be present when the change is effected, and in abdominal operations this change should be made before the operation is begun. Very little chloroform will be required to keep up the proper degree of unconsciousness.

As a result of a very large experience Hewitt uses much less ether and much more chloroform than formerly. He holds that it is as safe to keep up the anæsthesia of chloroform as that of ether, and that the risk of subsequent bronchial and pulmonary complications is undoubtedly reduced. He has often anæsthetized according to this procedure the patients in the sitting posture, and in not a single instance has he been compelled to place them horizontally.

By his arrangement of cylinders he is able to administer nitrous oxide and oxygen in combination and to keep up the anæsthesia for an almost indefinite time. This method is the safest at present known and is devoid of after-effects. The anæsthesia is not so deep as that of other agents commonly employed; the muscular system is not so completely relaxed; nor is it possible always to completely abolish reflexes. He is not satisfied with it in severe surgical cases. His best results have been with rather debilitated women or children. Robust and vigorous male adults, especially those of alcoholic habit or excessive smokers, are not good subjects. In one case of breast excision, in which the anæsthesia was kept up for thirty-five minutes, a good deal of vomiting followed.

Hewitt's observations concerning the use of nitrous oxide before ether are especially serviceable. This plan of anæsthetizing is at times highly inapplicable and unsuccessful. Cases are seen in which there has been a narrow escape from fatal asphyxia. Muscular men of middle life who have become rather obese should never be anæsthetized by this method. If it is employed only a small quantity of nitrous oxide should be used, and ether should be gradually added to it. The plan of administering a full dose of nitrous oxide and changing to ether is, however, very useful in children and in women, provided that there are no contra-indications to ether in the patients.

The use of nitrous oxide, ether and chloroform in succession is warmly commended. The initial anæsthetic, nitrous oxide, rapidly destroys consciousness and prevents struggling. The intermediate anæsthetic, ether, is useful because the circulation will remain unimpaired by the strain imposed upon it should rigidity or suspended breathing arise before deep anæsthesia, and because the stimulant effect produced by the ether lasts for a considerable time while chloroform is being given. Chloroform is administered because of the quiet and deep anæsthesia which it produces, because of its

great convenience, and because of the rarity with which bronchial and pulmonary after-effects are met with after its use. Hewitt states that, given no special contra-indications, there is no better plan of anæsthesia than this.

The A. C. E. mixture he commends for middle-aged and powerfully built men, with double chins and thick necks. It is first dropped upon an open Skinner's mask; after a couple of minutes a Rendle's mask with more of the mixture upon it may be substituted; and immediately any rigidity begins to show itself the Rendle's mask may be exchanged for an Ormsby's inhaler charged with ether. By this plan he has been enabled to successfully anæsthetize without any difficulty many such subjects.

Of the total number of cases anæsthetized by Hewitt there were thirteen which exhibited threatening symptoms. The four factors giving rise to dangerous symptoms are, he states, the anæsthetic itself, the state of the patient, the posture of the patient, and the surgical operation.

In the first case which exhibited dangerous symptoms breathing stopped before the patient was thoroughly anæsthetized. As the patient was greatly cyanosed ten ounces of blood were drawn, and the breathing immediately commenced. It is very common just before anæsthesia is established for the breathing to become temporarily suspended. This is due to acts of swallowing, which are more tardily performed than when consciousness is intact, thus closing the glottis. In addition there may be general muscular spasm. In the vast majority of cases this impaired breathing comes on just before stertor and passes off spontaneously, or may be made to do so by removing the inhaler, rubbing lips with a towel, or pushing the lower jaw forwards. In more obstinate cases, in which the jaws are clenched and the neck muscles are rigidly contracted, it may be necessary to separate the teeth and to pass the finger to the back of the pharynx, when breathing will recommence. Unless this condition is remedied it may pass on to a dangerous or even fatal degree of asphyxia.

The second case, presenting dangerous symptoms was one of disease of the heart in which ether was given, full strength by the Clover inhaler, since the patient was well built and of alcoholic habit. This method commonly produces in these patients the most satisfactory anæsthesia. In cases of heart disease in which there is evidence of want of compensation, all asphyxia methods should be carefully avoided. Nitrous oxide alone or in conjunction with ether is equally unsuitable. The best anæsthetic in such cases is the A. C. E. mixture, or, if for any reason ether should be preferred, it should be given by an open inhaler which does not, by eliminating oxygen, throw extra work upon the right side of the heart.

When the patient is of full habit he naturally becomes purplish or bluish under ether; sometimes he becomes ashy or livid, and this must always be regarded as an indication of danger. Moreover, whenever the lids are only partly closed and the globes of the eyes are turned slightly upwards so that more of the sclerotic than usual is visible, attention should be directed to the patient's general condition. Widely opened lids with the

globes fixed in their normal horizontal axes may be met with in the most satisfactory types of anæthesia. Flaccid, nearly closed lids, displaying subjacent sclerotics, are usually indicative of an unsatisfactory condition.

There was one case of severe bronchitis following ether administration, and one interesting case of suspended breathing during recovery after ether administration for putting up of fracture of the femur. So far as the administration of the anæsthetic went, there was very little to note beyond that a great deal of mucus was secreted. When the anæsthetic was discontinued, the patient became rigid, with clenched jaws, cyanotic, obstructed breathing incidental to commencing vomiting. Prying open the jaws was performed, the tongue forceps applied, and the finger passed to the back of the throat. Respiration was not started by any of these measures. Tracheotomy was then performed, and directly this had been done a great deal of mucus escaped from the tube. Hewitt states that patients should be turned on the side immediately the anæsthetic is discontinued. By this procedure mucus will tend to flow out of the mouth, the tongue will gravitate into the cheek, and stertor will cease.

Of the 6,657 cases of anæsthesia there were only three in which the anæsthetic could in any way be held responsible for the fatal issue, and only one in which the anæsthetic was the sole factor.

In a case of appendicitis following typhoid fever the patient apparently died of broncho-pneumonia thirty-four hours after operation. Hewitt holds that the chances of pulmonary complications would have been less if chloroform or the A. C. E. mixture had been given, and that from this experience it is fair to infer that the unusual cyanosis met with during the administration might with advantage have been taken to indicate that a change from ether to chloroform should have been effected.

The immediately fatal case occurred under chloroform and during the period of preliminary excitement.

As to the gastric after-effects of anæsthetics other than nitrous oxides in 275 cases in which this was noticed there were none in 109, slight in 109, moderately bad in thirty-five, and severe in twenty-two. Calculating on a percentage basis, it is noted that thirty-six per cent. of the ether cases had no after-effects; while thirty-two per cent. of the ether cases followed by chloroform were similarly fortunate; 7.2 per cent. exhibited severe after-effects after ether. Patients are more apt to suffer from slight after-effects when ether has been used, but the chances of protracted vomiting are greater when chloroform has been administered. There can be no doubt that abstinence from food for at least four hours before operation should be enforced. Clear soup or beef tea is the best form of nourishment before operation. The practice of giving a patient beef tea three hours before operation is open to objection. The stomach should not only be emptied, but digestion should have been finished for some little time.

A tabulation shows that the severity of the after-effects is markedly influenced by the continuance of the anæsthetization. As to the prevention

of the gastric after-effects, in addition to previous regulation of the diet it is essential that the bowels should be thoroughly evacuated; this is accomplished by administering a purgative on the night before the operation and an enema on the morning itself. The patient should be rendered anæsthetic as rapidly as possible; a deep anæsthesia, free from swallowing movements, should be maintained. The head should be kept to the side for the escape of mucus and saliva, and the mouth should be frequently wiped out. The patient when in bed should be turned well upon his side and the bed should not be moved, and the room should be kept quiet. No nourishment should be given until the patient himself asks for it.

If nausea, retching or vomiting be present the patient should be given at intervals two or three ounces of very hot water to drink. The taste of ether is best overcome by moistening the lips with lemon juice. If there appears to be a neurotic element present, enemata of twenty grains of bromide of potassium in two ounces of water will often answer well. The inhalation of vinegar from a towel is very useful in arresting vomiting, as is also the application of mustard leaf to the epigastrium.

This communication of Hewitt's is extremely important, as it is founded upon the careful, minute, detailed observation of an accomplished and widely experienced anæsthetist. The diversity of his methods and the multiplicity of his apparatus do not commend themselves to an American surgeon. One important lesson, however, taught by his paper is that there are merits in ether, chloroform and nitrous oxide; that each has its appropriate place in surgery; and that in place of the slavish adherence to routine it would be wise to judiciously select in accordance with the condition and temperament of the patient. His practical observations upon certain difficulties that arise during anæsthetization, his strictures concerning the employment of chloroform and nitrous oxide in the robust, are useful. His reasons for substituting ether by chloroform will scarcely be conclusive to American surgeons, save in exceptional cases—*i. e.*, those with a tendency toward pulmonary congestion. Under such circumstances the following of Hewitt's plan may well be commended. It would perhaps have been well to have called attention to Laborde's method of traction upon the tongue in restoring respiration during the late period of anæsthesia and flagellating the epigastrium by means of wet towels.

The reversed abdominal motion—*i. e.*, retraction of the epigastrium and abdomen—upon expiration in diaphragmatic paralysis is frequently observed when the anæsthetic has been pushed too far. Hare and Martin showed in experiments that the diaphragmatic muscle is usually the first to be paralyzed, and have frequently called attention to the importance of carefully watching the abdomen to see that the diaphragm is properly performing its function and is not being sucked up into the chest with each inspiration, thus preventing the lungs from properly expanding. The attention which Hewitt calls to the condition of the eye is not in accordance with that held by the American surgeons; but it must be remembered that

the Clover apparatus is not commonly employed by American anæsthetists. It is very common to see the eyeballs turn up and the lids half open. We have learned to regard wide dilatation of the pupil as the only important ocular symptom which is likely to indicate grave danger. In the great majority of anæsthetized patients the eye rolls up as it does in sleep.

The advice given to push the jaw backwards for the purpose of inducing slight stertor seems to be unwise. With experience the anæsthetist soon learns to recognize the quiet, absolutely free breathing which is an index of the perfect anæsthesia. Pressing backward of the jaw always obstructs the respiration to a greater or less degree, and the only manipulation which should be practised upon it is to lift it forward and to extend the head for the purpose of rendering the air-passages freer.

A great disadvantage of chloroform to which Hewitt has not called attention is its lethal effect upon the kidneys. There is some superstition to the effect that ether is to be avoided when a patient who requires anæsthesia has any form of nephritis. All the observations of recent years have proven apparently beyond contravention the falsity of this doctrine. In Hewitt's large number of cases there is not a single death which occurred during the administration of ether, although this anæsthetic was given in a greater number of the sum total of his cases. Of the very few who took chloroform one died absolutely from the anæsthesia, since the fatality occurred in the early stages of its administration.—*Therapeutic Gazette.*

The Young Practitioner and the Sick Child.—Mr. Edmund Owen, F.R.C.S. (*St. Mary's Hospital Gazette*, March), in a paper read before the Medical Society of St. Mary's Hospital, London, has some very pertinent remarks upon this subject, and, moreover, makes them in his own inimitable way which has given him first rank as a lecturer. He says that when his hearers caught sight of the foregoing title to his forthcoming paper they probably said to themselves : "I know just what line he will take; he will tell us that the young practitioner probably knows nothing about the sick child, and that, for his part, he is sincerely sorry for them both." Gentlemen, he continued, if this is actually what you did say to yourselves, you were perfectly correct! But I am going to do something more than express my sorrow for the newly-fledged practitioner and his unfledged patient; I am going to try to find out how it is that he does not know what is the matter with the child nor how to treat it, and then to make suggestions which may help toward placing him on a surer footing in these respects.

Mr. Owen makes a great point of advising his student hearers to spend some part of the fifth year of study in the dissecting room practically working at the anatomy of the child, with special reference to the development of the bones and the surgery of the joints. As to obscure cases, he says, "Parents are sometimes unreasonable," and he strongly advises, when necessary, a frank confession of ignorance and the adoption

of a waiting policy, enforcing this course by the avowal that this is what he does himself. Mr. Owen says:

I confess that I like now and then to meet a young practitioner who "doesn't know." I do not mean that I rejoice exceedingly when I meet a man who doesn't know that acute osteomyelitis of a boy's tibia is not erysipelas, for instance, but the man who says that he can not arrive at a satisfactory answer to some clinical enigma and asks help in rendering the correct solution. That is the sort of man to be trusted!

Unfortunately, the rank and file cannot always afford to dare to do what their leaders may; and while, professionally, Mr. Owen's confidence would be highly valued, practically it is the admittedly "unreasonable" parent's confidence that pays the rent and the butcher's bill. As to methods of examination, Mr. Owen says that the examiner who asks the fewest questions, whether of child or of adult, usually gets on best at a clinical examination. He then enumerates a series of "Dont's" which are always useful if you can only remember them at the right time. Don't ask a child "how long it has had it," whatever "it" may be. You will probably be told "Oh, a long while"—a week is a long while to a child, even perhaps a few hours. Don't at once attack a child with a stethoscope or even let it be hanging in a hideous festoon about your neck. Don't attempt to examine a child until you have him undressed, though on this point a caution as to undue exposure is added, with a dig at those who seem terribly afraid of overlooking something in auscultation which the autopsy will reveal. On the question of temperature-taking Mr. Owen says: Further, don't at once ask the mother, grandmother or nurse what the child's temperature is. It really does not matter; and if it is high, the involuntary expression of your face is very apt to cause the mother needless distress. You have no idea of the amount of domestic alarm and unrest a clinical thermometer has caused! A clinical thermometer in the hands of the mother may cause as much unhappiness in the household as a toy pistol in the hands of her eldest boy. Sometimes I forbid a child's temperature being taken—especially when I have reason for thinking that it is likely to go up, and so inevitably to cause alarm.

Special attention is directed by the author to the careful diagnostic study of rashes, not only of the specific fevers, but also of eczematous, diphtheritic, septic and ptomaine rashes. Mr. Owen's humor shows itself in his description of the difficult part the young practitioner often has to play while the grandmother and the monthly nurse are in the house. It is then generally two to one against him, for though in a crisis the infant's father may side with him, his support does not actually amount to much. The infant's grandmother he describes as frequently a very ill-informed person with strong pretention based upon the practical instruction which she acquired in years long gone by; and he adds that in his experience grandmothers are not fitted for the care of modern infants. As to the monthly nurse, she hurls at the young practitioner's head scraps of clinical experi-

ence gleaned from Doctor So-and-So, many years his senior, and watches for the effect. But where we should have expected most from Mr. Owen's paper we are somewhat disappointed. On artificial feeding, and in the wholesale condemnation of artificial foods, he is very strong. "When I see," he says, "a miserable anæmic child, with a large head and pinched face and chest, a distended belly, big-ended bones and deflected limbs, I know that the child has been reared upon condensed milk and other artificial foods." He tells us all about what we ought not to do in the way of artificially feeding infants, and incidentally remarks; "You will notice—your physiological education will have directed your attention to it—that the Creator intended that the milk should always be given quite fresh—'alive,' as it were. It was not even to be stored away in any vascular receptacle, like the bile, for instance, but was to be secreted just as, and when, it is wanted. The sailor in the Arctic Circle, who subsists on a diet which is perfectly 'physiological,' except for its want of fresh animal juices and fresh vegetables, sickens and dies of scurvy." But he does not tell us what we *are* to do when the mother either cannot, for the sake of herself, her child, or both, or will not, nurse her child. To be sure, he makes a vague reference to fresh milk as a princely diet—meaning thereby cow's milk; but what with milk as a mode of conveyance of diphtheria, milk as a mode of conveyance of typhoid, the difficulties of milk composition in all its various aspects in relation to human milk, etc., we are left by the author just when what we most need is light. Even our efforts to "humanize" cow's milk have to bring us into the clutches of the condemned manufacturer. We await a series of "Do's" from Mr. Owen to counterbalance the bare negation of his therapeutic protestantism.—*New York Medical Journal.*

The Treatment of Carbolic Acid Poisoning with Vinegar.—The following case is related by Dr. A. Paget Steavenson in the *Indian Medical Record* for December 1st: The patient was a girl, eighteen years old, who said she was subject to "fits." On August 3, 1896, she was taken with one, and when the physician saw her she was in a semi-conscious condition and frothing at the mouth. She had vomited slightly, and the vomited matter had a sour smell, but no carbolic acid odor was observed. She regained consciousness, and a bromide draught was administered. She gradually became worse and another physician was called to see her. He diagnosticated the case as one of carbolic acid poisoning, and, as he could not rouse her or get her to swallow anything, he ordered her to be taken to the hospital.

When she was admitted she was quite unconscious, cyanosed and nearly pulseless. The lips and the tongue were discolored and the breath had a slight carbolic acid odor. The author gave her a hypodermatic injection of strychnine (one eightieth of a grain). He then passed a soft stomach-tube, washed the stomach out with equal parts of vinegar and water, and followed

this with about six pints of warm water. He then gave her five ounces of milk and an ounce of brandy. She was then put into bed and kept warm. She gradually regained consciousness and a few hours afterward she was able to speak. She was fed on Benger's food, milk and soda water for the next three days. She did not vomit or complain of any pain. Carboluria was present for two days.

The author states that he was led to use vinegar in this case by Professor Carleton's suggestion in the *Practitioner* of August, 1896. He can not state definitely how much carbolic acid was taken. The long period of unconsciousness, the rapid recovery, and the absence of discomforting after-effects speak well, he thinks, for the vinegar, and he is of the opinion that it should be given a fair trial, especially as it is a remedy easily obtained.—*New York Medical Journal.*

Iodoform Injections in Tuberculous Lymph Glands.—Hammerschlag has been remarkably successful with intraglandular injections even in the large-celled hyperplastic lymph glands on tuberculous subjects, which usually are sent to the surgeon. In the case of well-to-do patients he precedes the injections with the general anti-tubercular treatment, climate, baths, etc. After local anæsthesia he injects one or two centimeters of the 5 to 10 per cent. iodoform glycerine emulsion, first on one side and a week later on the other. He states that the result in his six cases was remarkably rapid and satisfactory, the tumors subsiding until not a trace could be seen above the skin and no scars left. In another case he found the results equally fine although the injections were made in the periphery of the gland, and he suggests that others with larger material at their command might experiment whether periglandular injections may not be as efficacious as the intraglandular.—*Deutsche Med. Woch.*

Right Kind of Toothbrush.—A healthy mouth is one of the essential conditions of a healthy body. The best way to secure healthiness of the mouth is frequent thorough cleansing. The following description of what a toothbrush should be is taken from an American dental journal: "The proper toothbrush is the one which will, by its shape, reach as nearly as possible all parts of the mouth and all parts of the teeth in the mouth. The handle part should be a little curved in shape, the bristles being on the inner side of the curve and set in tufts, not close together, and, because of this fact, they should be very stiff. That a closely set brush becomes very filthy anyone may convince himself by taking one of these brushes after it has done duty for a few months by parting the bristles and looking closely into it. With an open brush this condition does not exist, because the construction of it allows thorough washing and a thorough circulation of air, and consequently a thorough drying of the brush and return of a rigidity of the individual bristle and series of bristles. The curved shape of the handle is for the purpose of bringing the brush end

more easily under control of the hand while using. At the extreme end of the brush a larger and longer tuft of bristles should be placed, enabling the user to reach more effectually the palatal and lingual portions and surfaces of the teeth, as well as the posterior aspect of the molars. The brush should always be thoroughly washed in running water if possible, the water forced out by drawing the thumb over the bristles and after that dried upon a towel. Three of these brushes should be in use at a time, and consecutively, thus allowing in the interim sufficient time to dry the bristles, making them more effective in their turn for use. The brush to be effective should be used in every direction, and particularly should the movement be in a vertical manner, brushing down upon the upper teeth and up upon the lower teeth, allowing the stiff and scattering bristles to go between the teeth to remove every particle of food finding lodgment there. One should not be afraid to brush the gums at the same time, even if they should bleed; the more blood, the more is brushing to be recommended, thus relieving congestion by depletion.—*The Indian Medical Record.*

Phosphorus in the Treatment of Rickets.—A few years ago Kassowitz announced to the profession that in phosphorus he had discovered a specific in the treatment of rickets, and, for a long time, this statement went unchallenged. The drug was extensively employed, but seemed to exert no effect either in modifying or shortening the duration of the disease. Kissel recently published in *Virchow's Archives* a series of experiments with the drug on growing bones. According to this investigator the drug is more toxic than is generally supposed, and in no instance did it exert a favorable influence on growing bones. There is no evidence in favor of the use of phosphorus in rickets.—*Western Medical and Surgical Gazette.*

Treatment of Tapeworm.—

℞.	Black oxide of copper,	gr. xc.	
	Prepared chalk,	gr. xxx.	
	Kaolin,	gr. clxxx.	
	Glycerine,	q. s.	M.

Divide into 120 pills. From eight to twelve pills are to be taken daily. For a week the patient takes two pills four times a day, and for the second week three pills four times a day. During all this time he must abstain from taking anything acid. At the end of two weeks a good dose of castor oil is given.

For children the following formula is employed:

℞.	Black oxide of copper,	gr. lxxv.	
	Prepared chalk,		
	Magnesium carbonate,	āā gr. xv.	
	Tragacanth,	gr. cl.	
	Glycerine,	gr. lxxv.	
	White sugar,	gr. dc.	
	Water,	q. s.	M.

Divide into fifty pastilles. Two or three to be taken daily. At the end of three or four days the *débris* of the tænia appear in the stools, and the symptoms caused by it disappear. This treatment requires no rest in bed, and it is particularly recommended for cases that have proved refractory to other remedies.

—*Practitioner.*

Unna's Ichthyol Ointment for Profuse Sweating of the Feet.—The formula is given as follows in the *Gazette de Hebdomadaire de Médecine et de Chirurgie* for October 14th:

℞.	Ichthyol.	25.	
	Water,	15.	
	Lanolin,	25.	M.

Ointment.

INTERNATIONAL MEDICAL MAGAZINE.

An Illustrated Monthly of Medical and Surgical Science.

Edited by

WALTER L. PYLE, A.M., M.D.

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PHILADELPHIA, SEPTEMBER, 1898.

Notice of Change.

The International Publishing Company begs to announce the retirement of Dr. Walter L. Pyle from the editorship of the INTERNATIONAL MEDICAL MAGAZINE. Dr. Pyle will continue his interest in the magazine by taking charge of the department of ophthalmology. Full details of the new editorial management will be given in the October number.

The Medical Departments of the Army and Navy.

Much of the current criticism of the War Department with regard to the medical service, as well as its other branches, is doubtless attributable to exaggerations by the sensation-mongering yellow journalism of the day of the natural complaints of undisciplined and wholly unseasoned volunteers who have been suddenly subjected to extraordinarily unusual climatic and other conditions which would test severely the most experienced regular soldiers of any country. Young men of the better class, accustomed to all the luxuries of an American city home and inexperienced in camp life, will naturally complain when deprived of butter, feather pillows and hair mattresses. When to these deprivations there is often necessarily added a temporary dependence upon dubious water, as well as upon food which does not include fresh meat and vegetables, they feel that their lot is unnecessarily hard. There was an abundance of complaints from similar causes in our Civil War, when there was not one-tenth the amount of instigation from unprincipled sensational newspapers. Evidently matters are not nearly so bad as they have been painted. For instance, General Shafter said to a

reporter upon his arrival recently at Montauk Point that there was very little truth in the reports of lack of supplies and of medical care among the troops at Santiago; that they had an abundance of everything, and that practically the only thing they needed was a better climate.

However, it is no doubt true enough that there have been mismanagement and incompetency in some quarters, and the very thoughtful and suggestive paper by Dr. A. L. Benedict, which appears under Original Communications in the present number of this journal, shows one of the important causes. The advances in medical science have rendered a certain amount of specialism indispensable, and very few surgeons of to-day are competent to deal with all the complicated sanitary and medical questions which are demanded for the proper hygienic care of a camp and the adequate treatment of its occupants when disease comes upon them. We heartily agree with Dr. Benedict that there should be well-equipped modern physicians as well as surgeons to look after the welfare of our soldiers and sailors.

Rest and Poultices in Digestive Disorders.

In another column will be found an abstract of an interesting paper by Dr. Spivak, of Colorado, advocating the employment of a modification of the Weir-Mitchell rest treatment in gastro-intestinal cases. The author considers the application of rest to the digestive organs under three heads, thus: 1. Rest in bed. 2. Diet. 3. Hot poultices. By rest in bed is meant by him in the severe cases, the complete Weir-Mitchell plan of absolute rest in bed, use of bed-pan with isolation and massage. He does not mention the full feeding which forms a part of the same plan, but apparently he does not adopt this, since under diet, he advises in the beginning one to three days' abstinence from all food, not even giving nutritious enemata unless after three days a longer period of fasting is necessary. He does not make it clear how the well-known curative effects of hot poultices (or the similar effects of even tepid, wet compresses) are to be classed under the head of rest. The curative action of massage, especially local abdominal massage, is equally inexplicable as a rest-giving procedure. But these are merely technical criticisms and do not detract from the merit of a method which seems to us of undoubted value.

The securing of rest to the suffering organs by physical quiet and by lessening the work of those organs through temporary fasting if necessary, followed by a carefully selected bland and easily digested diet, has long been advocated and practised with advantages in gastric ulcer especially. All of us have also doubtless applied the hot poultices in acute cases of

pain or inflammation, wet compresses being oftener relied on in the more chronic cases. Massage has been very widely used, and not always with a proper appreciation of the indications and contra-indications for it. Such a combination of all these procedures as Dr. Spivak recommends, though much more than a rest treatment, promises well in many gastro-intestinal cases, and ought to be given a wider trial. The cases reported by him would seem to indicate that this method is particularly suitable to the various nervous aberrations of glandular and motor functions in the digestive tract.

BOOK-REVIEWS.

Text-Book of Diseases of the Kidneys and Genito-Urinary Organs. By Professor Dr. Paul Fürbringer, Director of the Friedrichshain Hospital, Berlin, Member Congress für innere Medicine, etc. Translated from the German by W. H. Gilbert, Baden-Baden. Published by H. K. Lewis. London, 1898. Vol. II., pp. 1–310.

In this volume the author speaks of pyelitis, perinephritis, nephrolithiasis, tumors of the kidneys, abnormalities of the kidneys, diseases of the bladder, diseases of the urethra, and diseases of the genital organs.

Regarding pyelitis the author states that the lesion is found in 41 % of patients suffering from urethral stricture, and in 74 % of those who suffer from hypertrophy of the prostate which gives rise to an ammoniacal decomposition of the urine.

Perinephritis which exists in chronic nephritis, he considers under the term "paranephritis," which means an inflammation with a tendency to suppuration of the cellular fatty tissues surrounding the kidney.

For renal calculi the usual causes are recited, such as gouty diathesis and rheumatism; neurasthenia is also put down as a causative factor.

A good feature in the treatment is noticeable from the fact that the author mentions by name each mineral spring having a beneficial effect in this class of diseases.

Thirty-seven pages are devoted to tumors of the kidneys. In tuberculosis of the kidneys a contrast is shown between the prevalence of this disease in Germany and England. In the former Engel states that in Prague only 1 % was found, while King and Chambers give 18 % for England. A simple and useful method for detecting the tubercle bacilli in urine is given consisting of simply agitating the urine, filtering and examining the deposit, staining in the same manner as for the micro-organism in the sputum. The smegma bacillus seldom causes error.

Fürbringer's statement that "Primary sarcoma of the kidney as well as secondary sarcoma is very rare," may be somewhat questioned, as also the statement that "quinine does not have an inflammatory action on the vesical apparatus."

Contrary to the rule generally adopted by American writers cystitis is only dealt with in the chronic stage, the acute form not being mentioned at all.

In speaking of cystoscopy, pages 133 and 134, it seems just a little strange that such names as Bergmann, Dittel, Shuster, Nicoladoni, Kuster and Gold-

smidt are mentioned, while our own fellow countryman, Howard Kelly, has been omitted.

Only one variety of gonorrhœa is recognized and that due to the gonococcus of Neisser. Regarding prophylactic measures usually employed the author has small faith, believing that the rapid penetration of the gonococcus into the epithelial cells precludes the possibility of their early destruction. The fact is greatly deprecated that of all the different remedies recommended, but few have proven of any value, no progress having been made beyond the mixture advised by Ricord and composed of zinc sulphate and lead acetate.

American physicians may be somewhat surprised to know that the author restricts the use of beer in these cases to not more than one "quart" daily.

In the treatment of the more chronic forms different kinds of apparatus are introduced, but the Janet treatment receives no mention.

Of the complications of gonorrhœa in the female Sänger and Conrad's statement that one-ninth of gynecologic operations result from gonorrhœa is not questioned.

It is also stated that Martin, in 287 cases in which the ovaries were diseased, reported that 25 % resulted from gonorrhœa. Salicylates are recommended for gonorrhœal rheumatism.

In speaking of a much mooted question, Fürbringer says: "In our opinion masturbation has no other effect than moderate coitus naturalis, which only causes disturbances in a few persons, especially those suffering from neurasthenia. The harm is done by the excessive habit for which there are abundant opportunities." But the injunction that "The best advice for masturbators is sexual congress without marriage" involves the whole moral law and therefore must be received with a certain degree of mental reservation.

The last chapter, devoted to sterility in the male, is full and complete, fraught with many valuable hints and goodly advice, but a review is necessarily restricted and prevents more than a simple reference to the many valuable lessons taught by the author's extensive experience.

The book is of convenient size and well printed. The illustrations are few but well executed. In the treatment of the different diseases no prescriptions are given, the drugs only being mentioned. The bibliography is large and covers a large field, and for more advanced students the book becomes of great service.

A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Chicago Medical College, Chicago. In one octavo volume of 632 pages with 422 engravings of which 47 are in colors and two colored plates. 1898. Philadelphia, Lea Bros. & Co. Price, cloth, $5.00, net; leather, $6.00, net.

This is a new book by a teacher of wide experience, founded upon the most approved principles and practice, with the exclusion of whatever is without a basis of pathologic observation or carefully observed experience.

The fundamental classification of the book is primarily pathological and secondarily regional, as the author is convinced that his reader will gain a much more useful idea of metritis, for instance, by closely associating it with vulvovaginitis, salpingitis, ovaritis and peritonitis, than by regarding it as a distinct and independent lesion. With such a logical view of diseases in their natural connection the student and practitioner is much better equipped to understand their local manifestations, which are also satisfactorily dealt with. A natural etiological sequence has also been observed so that the reader has the great benefit of sensible classification in the presentation of knowledge to his mind.

The illustrations are abundant and of excellent selection. Many are from

original drawings. The mechanical make-up leaves nothing to be desired. The book can be safely recommended as a complete and reliable exposition of the principles and practice of modern gynecology.

LECTURES ON TUMORS. By Jno. B. Hamilton, M.D., LL.D. Third edition. 21 illustrations. 1898. Philadelphia, P. Blakiston's Son & Co. Price, $1.25, net.

The third edition of this popular treatise has been thoroughly revised, particularly as regards nomenclature. The original lecture form has been continued. Several new original drawings have been added, and the text has been brought up to date.

A COMPEND ON DISEASES OF THE SKIN. By Jay F. Schamberg, A.B., M.D., Associate in Skin Diseases, Philadelphia Polyclinic, etc. With 99 illustrations. 1898. Philadelphia, P. Blakiston's Son & Co. Price, 80 cents.

This well planned little volume has been written for students, and is the best book of its kind we know of. It is concise, lucid and readable. The illustrations are worthy of a larger text. Duhring's classification has been followed, and is likely the best for teaching purposes. It is a marvel how the publishers can produce such a presentable book on a special subject at such a low price.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. By Joseph McFarland, M.D., Professor of Pathology in the Medico-Chirurgical College, Philadelphia, etc. Second edition. 1898. Philadelphia, W. B. Saunders. Price, $2.50, net.

In this new edition, Dr. McFarland has successfully endeavored to bring the work up to date in all departments. The object of the book is: 1. To convey to the reader a concise account of the technical procedures necessary in the study of bacteriology; 2. To give a brief description of the life-history of the important pathogenic bacteria; 3. To give sufficient description of the pathologic lesions accompanying micro-organismal invasions to give an idea of the origin of symptoms and the causes of death.

While several other books on this subject only outline the description of the pathogenic bacteria, and give the minute details of technic, the most of which is superfluous to any but the ultra-scientific bacteriologist (who probably is already thoroughly conversant with the subject and has no use for such a book), Dr. McFarland has written a genuine text-book in which every bacterium distinctly pathogenic for man is fully considered, and in addition has properly treated of the bacteriologic technic in a way sufficiently comprehensive to admit of the prosecution of all the necessary studies of pathogenic bacteria. The book is fully illustrated and well printed.

CONSERVATIVE GYNECOLOGY AND ELECTRO-THERAPEUTICS. A practical treatise on the diseases of women and their treatment by electricity. Third edition, revised, rewritten and greatly enlarged. By G. Betton Massey, M.D., Physician to the Gynecic Department of Howard Hospital, Philadelphia; late Electro-Therapeutist to the Infirmary for Nervous Diseases, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, of the Société Française d'Électrotherapie, of the American Medical Association, etc. Illustrated with twelve full-page original chromo-lithographic plates in twelve colors, numerous full-page original half-tone plates of photographs taken from nature, and many other engravings in the text. Royal octavo. 400 pages. Extra cloth, beveled edges, $3.50, net. The F. A. Davis Co., Publishers, 1914–16 Cherry St., Philadelphia; 117 W. Forty-Second St., New York City; 9 Lakeside Building, 218–220 S. Clark St., Chicago, Ill.

This edition has been enlarged and the illustrations improved, the author having employed a professional model who has either been carefully drawn or photographed to explain gynecic procedures. He covers electro-therapeutics thoroughly, including electric light baths and the use of the X-rays with the static machine. Considerable space has been given the treatment of fibroids and cancer by electric methods.

EAR RECORDS. By J. C. Lester, M.D., and Vincent Gomez, M.D. Ledger paper, well bound in two-color cloth. Containing 150 records, numbered, 25 extra blank pages and index. Price, $2.50. Published by J. W. & Geo. H. Hahn, 26 East 23d St., New York.

The authors call their work a method of recording ear-cases, and are to be congratulated in compiling a very complete method.

A work of this character is especially valuable to hospitals or teaching institutions in which complete and accurate records are of such importance. To the busy specialist, perhaps, these records may be found a trifle time-consuming in their details.

The book contains three main divisions, namely, Personal History, Functional Examination and Physical Examination. The portion devoted to personal history is subdivided as follows: duration, etiology, otorrhœa, pain, subjective symptoms, etc. Under each of these headings are a number of conditions any one of which may be indicated in an individual case. In an individual case it is necessary to indicate merely the conditions which apply to that case. The personal history record is certainly very complete, covering every essential detail. The next division of functional examination is altogether up to date, containing all the modern tests for hearing arranged in a convenient and intelligible manner. The record of physical examination is exceptionally good. It begins with the external parts, *e. g.*, mastoid, auricle, etc.; noting such conditions as eczema, tumors, deformities, pain, swelling, etc. Then continues with the varying changes in the drumhead, which is much facilitated by a satisfactory cut of the membrane tympani, upon which may be delineated the changes shown by the examination. Space is given for the record of nasal conditions and finally the treatment.

Taken as a whole this volume shows a painstaking effort to bring the record of aural cases to a scientific basis, an effort in which the authors have been eminently successful.

MEDICAL NEWS AND MISCELLANY.

American Physicians Honored.—The University of Edinburgh has conferred its honorary LL.D. upon Professor H. P. Bowditch, of Harvard University, and Professor William Osler, of Johns Hopkins University. The University of Michigan, at its last commencement in June, conferred its honorary degree of LL.D. upon Professor Abram Jacobi, of New York.

Major Lawrence S. Smith, Surgeon First Army Corps, a constant contributor to the department of Obstetrics and Gynecology of the INTER-

NATIONAL, died at sea of typhoid fever, August 15th, on board the hospital-ship *Relief*, while on his way home from Porto Rico. Dr. Smith was mustered into the volunteer service at Mt. Gretna, with the First Pennsylvania Regiment, of which he was Major and Surgeon for several years previously. He went with the regiment to Chickamauga and later was detached and ordered to report at Newport News to accompany Gen. Brooke's command to Porto Rico as Surgeon in the general hospital of the First Army Corps. He sailed for Porto Rico on the transport *Massachusetts*, and was taken ill with typhoid fever shortly after landing at Ponce. Dr. Smith was graduated from the college department of the University of Pennsylvania in 1888, and from the medical school in 1891, and he afterward served as resident physician at the Pennsylvania and University Hospitals. He had made quite a name for himself in his chosen specialty, and probably his last literary efforts were the abstracts in the most recent numbers of the INTERNATIONAL.

Professor Virchow's visit to England, which takes place in the first week of October, is to be made the occasion of a public dinner in his honor, given to him by the English medical profession. The chair will be taken by Lord Lister, who will be supported by all the leaders of the medical profession then in London. The holiday season may prevent the gathering from being quite representative, but most of the important London medical men hold appointments at one or the other of the medical schools, and as the schools open in October, absentees ought to be few. The purpose of Professor Virchow's visit is to deliver the Huxley Lecture, or Introductory Lecture to Students, at the Charing Cross Medical School.

Navy Full-Diet Table.—After much study the medical officers of the navy have adopted a new full-diet table, in which every care has been taken to provide for a proper quantity of proximate principles in a variety of food suitable for a liberal diet, says the *Army and Navy Journal*. For each meal in the table running through a week the precise amounts of albuminoids, carbohydrates and fats were arranged, bearing well in mind the preferences developed by a seaman's life. The bills of fare represent not only the ideal poor man's food, but food that cannot be surpassed by royalty as well. It is found in practice from the returns of all hospitals that these meals cost an average of thirty cents per day per person, or about ten cents per meal. The tables are thought to constitute the best possible fare, and represent a most excellent foundation for carrying other gastronomic luxuries. The naval full-diet table is as follows for one day in the week, the number after each article relating to ounces. Breakfast —Coffee, 1; bread, 4; butter, 1; milk, 6; sugar, 1; oatmeal, 1; beefsteak, 6. Dinner—Rice soup, 8; bread, 4; roast beef or roast or boiled fowl, 8; potatoes, 8; other vegetables, 6; pickles, 1; bread pudding with sauce, 6; or custard frozen, 8; fresh fruit, 6. Supper—Tea, ¼; bread,

6; butter, 1; milk, 2; sugar, 1; cold roast mutton or cold roast beef, 4; stewed dried fruit or baked fresh fruit or apple sauce, 4. The staples—coffee, bread, butter, milk, sugar and fresh and dried fruit, are the same for each meal, but there is a daily variety in meats and other articles for breakfast, dinner and supper. The proportions are about the same, however, especially in the matter of meats, as in the specimen diet table given above. In addition to its use for convalescents, the table is now observed for all naval hospital emyloyees, and is gradually becoming the standard aboard ship and in the marine corps. Its adoption was the result of most patient and thorough investigation by Surgeon I. D. Gatewood, who consulted all the leading authorities on the subject.—*Medical Record.*

Hospital-Corps of the United States Army.—At the outbreak of the war the hospital-corps consisted of 100 hospital stewards, 103 acting hospital stewards and 520 privates. The larger part of this number was ordered with the troops that left their respective stations to the camps of concentration and accompanied the regular regiments in the Fifth Army Corps to Cuba; the smaller part being left behind at the various Army Posts, and being just enough to take care of the medical property. Enlistments were at once ordered throughout the country of suitable men for the hospital-corps, special attention being paid to enlisting nurses, pharmacists, cooks, drivers, mechanics, etc. A good many medical students and young physicians were also accepted. By means of enlistments and afterward by transfers from volunteer regiments to the hospital-corps a large number of men were obtained, and to-day there are in service by actual count 5,084. Probably 1,000 are in service whose enlistment and transfer are not yet reported. In addition to the members of the hospital-corps enlisted for the purpose of taking care of the sick and wounded, there have been employed 141 male nurses and 386 female nurses under contract.—*Philadelphia Medical Journal.*

Martyrs to Duty.—Under this heading the *British Medical Journal* refers to two medical men who have recently fallen victims to typhus fever in Ireland. The first was Dr. Paul Dillon, of Killarney, a gentleman who was greatly beloved in his district. He had previously been assistant physician to St. Vincent's Hospital in Dublin, and was a very highly trained practitioner. He was a comparatively young man, having qualified in 1883. He contracted the fever while visiting a poor patient in consultation, and in the same nest two other medical men were also infected, although they have happily recovered. From the north of Ireland the death of Dr. Thomas Sullivan, son of Mr. T. D. Sullivan, M.P., is also announced from the same cause. Here again the disease was the result of a visit to poor dispensary patients, and death resulted in three days. These are fresh instances of the terrible risks which every day threaten the medical man, and from which no fear for personal safety makes him shirk.—*Medical Record.*

Old Medical Students.—Some authorities have suggested that a limitation should be fixed as to the latest age at which a student can be admitted into the profession. There appears to be no maximum in the British Empire. We find from our contemporary the *Chronique Médicale* that there certainly is no such limitation in France. Quite recently a student over fifty qualified in Paris. There practices in a village in the center of France a gentleman who lived to middle life as superintendent of police. When over forty he studied medicine and qualified. Since taking his degree he has exercised both his medical and his constabulary functions. This, says the *Chronique*, was found out at the end of a few years—an enigmatic observation. Does the combination of two callings answer, in respect to sanitation for instance, or does the medical policeman find double duties too onerous to be performed satisfactorily? All old playgoers remember the "Miller and his Men," and all who ever saw that melodrama wondered when a body of men who were millers all day and robbers all night managed to get any sleep. The same problem meets us when we consider the late-qualified gentlemen in the French village. Still more remarkable is the case of a M. Beaudemoulin. He lived to old age as a literary man of some note; his original works are not named, but he translated Horace into modern verse and—what proved more lucrative—he prepared a new liqueur and succeeded in getting it patented. At the age of seventy-two he began to work for the degree of Bachelor of Science of Paris, with intent to enter the medical profession. This was in 1876, but his intent was never fulfilled. Retiring age is a much more important question; yet in France, where rules for officials are in many respects unusually strict, they do not seem more particular than they are about limitation of age for qualification. A few years ago a surgeon to the Messageries Maritimes was still on duty in one of that company's steamboats though eighty-one years of age!—*British Medical Journal.*

Twin Bearing and Prolificacy.—Before the Edinburgh Obstetrical Society, at the December meeting, the above subject was under discussion. Dr. J. W. Ballantyne read a paper on the "Causation of Twins as Illustrated by some Clinical Histories." After giving the history of several cases he mentioned that of a woman who was one of a family of seventeen, no twins; one of her sisters had had triplets and another twins; she herself had had twenty-two children in eighteen confinements, viz., four times twins and fourteen single births. In all the cases referred to there was good evidence to show that the twins were of the binovular or dichorionic kind. He mentioned the association of twin bearing and prolificacy and deduced that the daughters of a woman who has borne twins are usually highly prolific, and conversely the mothers of twins are usually the daughters of specially prolific women. He mentioned the theory that the ovaries of the twin bearer resemble those of the fœtus in the great number of Graafian follicles they contain. Pleural pregnancies result from the

simultaneous rupture of several ovisacs, and that this is a consequence of the existence of a relatively or absolutely large number of ova in the ovaries. Dr. Haig Ferguson mentioned the case of a woman who had seven children in three years, twice twins and once triplets. Dr. James Ritchie referred to a mother who had borne thirty-two children; it had been mentioned in an application for life insurance and he had verified the statement.—*Journal American Medical Association.*

The Mouths of Glass-Blowers.—The effect of certain occupations in producing certain diseases has long been known to physicians and in some instances has forced itself upon popular notice. Mechanics, in fact, sooner or later, necessarily recognize that their trade exposes them to characteristic dangers, either local or constitutional. The intoxication of painters and others by lead has been so closely studied as to become classical. Affections of the skin and nails are usually common among workmen in certain trades. A recent contribution to the literature of the general subject is a very interesting paper published by G. Liaras, of Bordeaux, in the Revue Hebdomadaire de Laryngologie, d'Otologie, et de Rhinologie. ("La bouche chez les souffleurs de verre," 9 Avril, 1898.) The author, in beginning, refers to an elaborate study of the subject in an inaugural thesis by M. Chaumanet. He then speaks briefly of the manner in which the blow-pipe is passed from mouth to mouth by workmen. This fact alone suggests the facility with which infectious diseases may be spread from one person to another. We know, indeed, that syphilis and tuberculosis are spread in this manner. The primary lesion of syphilis thus acquired is usually seated upon the lips, but may affect other parts of the mouth, as the tonsils.

Men who have worked at glass-blowing for a number of years have a languid air and are prematurely aged. Their most striking characteristic, however, is the peculiar aspect of the lower part of their face. By this conformation they may be recognized anywhere as glass-blowers. The mark consists in a sort of prolapse of the lower part of the cheek, which appears too large for the buccal cavity. The skin in this situation is a little wrinkled and traversed by irregular grooves running from above downward. It is of a dull hue, but the hair is nowise altered. The epiderm is not thickened and preserves its normal elasticity. The derma is softened. The lips are soft and hang a little, the lower appearing a little more developed. If the man laughs, a series of concentric folds are seen upon the cheeks. When the man is at work his cheeks are distended and the wrinkles are effaced.

This dilatation of the cheek is more or less marked in workmen according to their age, constitution, manner of working and the position which they occupy. During the dull season the deformity lessens, to make its appearance again when work is resumed. This pathological curiosity has scarcely ever been described.

The lips, which as has been said, are often pendent, exhibit changes of mechanical origin and due to contact with the blow-pipe. The epidermis becomes hard and cracks. Sometimes they swell and are covered by a small blister, which is followed by an eschar.

Most glass-blowers can with difficulty separate their jaws. Upon returning to work after a period of rest they are generally attacked by gingivitis, which decreases at the end of about fifteen days. The teeth are often altered. Dental caries and neuralgia seem to be particularly frequent in these workmen. This result is due to the sudden changes of temperature, the use of cold drinks, neglect of the teeth and also to the act of blowing. The velum palati is often a little raised and projects backward.

The cavity of the mouth is enlarged and the mucous membrane lining the cheeks is thrown up into vertical and circular folds, giving it an appearance which has been likened to that of a tobacco-pouch. It is rough to the touch, but is neither ulcerated nor indurated. The buccal cavity is large in proportion to the thinning of its walls. All these pathological changes are due to the pressure within the mouth caused by the act of blowing and which has been estimated as equal to 150 millimeters of mercury and which is repeated 600 to 700 times a day. For this reason there is a vast difference between the aspect of the face when at rest and when at work. The habitual distension of the cavity of the mouth produces a dilatation of the orifice of Steno's duct.

When the mouth is opened as widely as possible and the folds of the mucous membrane are smoothed out there may be seen a mass of epidermal débris partly desquamated and bearing some resemblance to preputial smegma. These are special opaline patches, professional lesions which in very exceptional instances have a certain similitude to syphilitic mucous patches. They are due to the compression of the air and the constant irritation to which the parts are subject and are constituted by macerated and accumulated epithelial cells. These patches soon disappear when the men are not at work, but return when work is resumed. They can be confused with syphilis only in their early period before exfoliation has occurred. There are essential differences between them and the lesions of secondary syphilis. The latter rarely appear upon the cheeks, but in such cases are accompanied by lesions upon the gums and elsewhere. The opaline patch has a characteristic site and is constantly a bilateral lesion. The mucous patch is ulcerated, the professional patch is constituted by a constantly renewed exfoliation, and, finally, symptomatic adenitis is found in syphilis, but never in the disease of glass-blowers. The opaline patches of glass-blowers may be confounded with lichen planus, but the large, round, silvery-white lesions and the absence of lesions upon the tongue exclude the idea of lichen.

The alterations in glass-blowers' mouths have neither the consistence nor aspect of leukokeratosis. Furthermore, leukokeratosis is almost always

situated at the commissures of the lips. It forms a single pearly-white patch marked by some fissures and does not regularly desquamate. It must be remembered, also, that the opaline patches of glass-blowers disappear spontaneously when the man is out of work, and are never accompanied by ulceration or grandular enlargement. M. Chaumanet states that none of the lesions leave definitive traces. To M. Liaras this statement appears somewhat exaggerated and he finds it difficult to believe that the distended tissues can entirely regain their normal proportions.—*Medical Bulletin.*

Diphtheria Antitoxin Patented.—We believe that the information that Behring has not only applied for but received a United States patent for the production of diphtheria antitoxin will come not only as a surprise but also as a disagreeable shock to our readers. On January 11, 1895, a patent was applied for in the following terms: "Be it known that I, Emil Behring, a citizen of the Empire of Germany, have invented certain new and useful improvements in the manufacture of diphtheria antitoxin of which the following is a specification: My invention consists in the production of a substance called 'diphtheria antitoxin' by means of which people may be immunized against diphtheria and people suffering from diphtheria may be cured, etc." This patent, after having been several times refused, was finally granted June 21, 1898. We learn that more patents have been applied for by Behring and other prominent bacteriologists of Germany for bacteriologic products in which they have made some improvements. Behring's application for a patent is apparently only the beginning of a general attempt by some German investigators to reap direct money reward for any discoveries which they may make or for which they may be able to convince the Patent Office of the correctness of their claims. This new attitude among some who have previously done merely scientific work may turn out to be a matter of great importance. Lest we judge Behring unfairly, let us consider what portion of credit belongs to him and what to others for the discovery of diphtheria antitoxin and its application to disease.

Klebs was the first to describe the bacilli in the tissues of those sick with diphtheria, Loeffler to demonstrate their etiologic relation to diphtheria and that repeated injections of them produced immunity. Roux showed they developed in bouillon a substance called "toxin" which caused, after injection, all the constitutional symptoms produced by the absorbed poisons from the diphtheria bacilli in the pseudo-membranes. C. Fraenkel equally with Behring, repeated Loeffler's experiments and showed that injections of toxins as well as of living bacilli would produce immunity. Meanwhile many following the directions of Pasteur produced in animals immunity to many diseases by cultures or toxins, and Richet and others discovered that the serum from some of these immune animals, when injected into other animals, conferred immunity. Behring and Kitasato

working together were the first to prove that the serum of animals immunized to tetanus contained immunizing substances, and at the same time Behring, Wernicke and Aronson found the same to be true of animals immunized to diphtheria, and suggested that the serum might be found to be useful in diphtheria in man. A trial of a serum weak in antitoxin on a few subjects seemed to have some beneficial effects. Behring and Aronson in Germany, and Roux in France, now produced antitoxin on a larger scale. To Roux's experiments we owe the first convincing proofs of the serum's benefit. After Roux's reports, and the general use and manufacture of antitoxin, Behring applied in Germany and elsewhere for a patent for its production.

Behing's patent, therefore, covers much thought out by others, such as the injecting into animals of the diphtheria bacillus (Loeffler's discovery) or of its toxins (Roux's discovery) into horses (Roux's suggestion). Not even Behring would deny that without the use of the diphtheria bacillus no antitoxin could be produced, and that without the use of toxins no high-grade antitoxin could be obtained. From the above we see that although the first discovery, or at least the first publication of the fact that in the blood of immunized animals there is a substance which neutralizes the diphtheria poison, is and probably should be credited to Behring, yet it is equally true that if Loeffler and Roux had not published their discoveries Behring would in all probability not have made his, and if they had patented them Behring would have been absolutely prevented from making use of his discovery. It is also certain that if Behring had not hit upon this discovery when he did others would have done so, as the principles had been established for some diseases already, and all were being experimented with to determine in which the curative substances would be of sufficient amount for therapeutic purposes.

Behring has strained the intent of the patent law in obtaining an instrument for appropriating to his own advantage the disinterested investigations of scientists who supplied the data and even the suggestion he adopted. They gave their results freely to mankind without a thought that the benefits directly derivable would be restricted for the profit of an individual instead of being a freely distributed for the relief of sufferers from a deadly disease. Science itself suffers from an abandonment of the liberal principles which are the glory of her votaries. The whole patent system is by no means secure in public favor, and in proportion as antitoxin proves to be a public necessity, and Behring's gain increases, just so far will he furnish the most powerful argument yet presented for the abolishment of the entire patent law.

If men who have previously been working for purely scientific purposes desire to work instead for money rewards, no one can object so long as they frankly state their purpose at the beginning. To seek applause first for disinterested work and then to grab for a monetary recompense is not creditable. If this change of purpose ever becomes general it will be,

we believe, a great misfortune to science and the race. It will subject all scientific workers indiscriminately to the suspicion of being open to the criticism of being possibly biased by personal advantage. Those who are still guided by different and higher aims, will be included in this distrust, and, indeed, be driven to patent all discoveries of new facts, so that those eager for gain may not seize, and, after giving them a practical application, patent and control them. We are hopeful, however, that the best men will still be satisfied with the old rewards of interest in their pursuits, the fellowship of kindred workers, and by the honor and position which come from successful effort. Money brings much that is very desirable, but there are some things too valuable to sacrifice to it. We trust for the good of the sick that this patent will be tested and overthrown in the courts.—*Medical News.*

Double-Headed Monsters in Fiction.—The utilization of pathologic data in fiction has become so widespread that the neglect of the rich field of teratologic conditions must appear rather mysterious. Considering the casuistic discussions of the marriage of the Siamese twins and of the marital status of the pyopagic (back-united) "Double-Headed Nightingale," it seems strange in these days of realism, that so little use should be made of double-headed monsters in fiction. This appears particularly unaccountable, when the legal, amatory, ethic and marital complications thereon resultant (capable of producing such beautifully intricate plots) are considered. The "Double-Headed Nightingale" was legally decided to be two persons; marriage of one man to whom would result in bigamy. Under certain legal opinions in Illinois, simultaneous marriage with more than one woman does not constitute bigamy in that State. Under this construction of the Illinois statute regulating marriage, the marriage ceremonies must be separate to constitute bigamy. Marriage in Illinois with the "Double-Headed Nightingale" could easily be made a practical simultaneous procedure and hence legal. Under the intricacies of the New York divorce law, a New York marriage could, under certain technicalities, be easily set aside in Kansas, and a second marriage thereafter would be legal. As the first marriage was still legal in New York, a man could easily have two wives in that State without committing bigamy. One half the "Double-Headed Nightingale" could be married in New York and the other (after proper divorce proceedings) in Kansas, both halves being legally wives of the same man in New York. Despite those tempting literary possibilities fiction has neglected this field. Besant employed, it is true, a double monster, but only as a portent in "For Faith and Freedom." Through the pages of that clever parody, "King Solomon's Wives," flits a double-headed caricature of Rider Haggard's terrifying Gagaool. With these exceptions, fiction has until lately neglected the fertile literary possibilities of female double-headed monsters.

It was reserved for an Ohio physician to demonstrate the brilliant out-

look for fiction in this particular. Dr. W. C. Cooper, of Cleves, Ohio, has proven the great value of the double-headed monster in fiction in his "Mystery of the Wetherton Mansion." His heroine is an atlodymus with two heads united at the neck to a single body. This monstrosity is the child of a wealthy judge of southern Illinois, who is a man of broad general culture. Dr. Cooper is called to attend the wife of the judge in confinement. Owing to severe dystocia the patient becomes moribund. Whereupon Dr. Cooper performs cæsarian section, delivering an atlodymus thus described by himself: The heads and necks were entirely distinct, the union of the necks occurring at their junction with the thorax. It was highly probable that tracheæ, œsophagi and blood vessels became uniform and common on entering the body. Young as this infant was, it was plainly evident that each head was directly individual. It could be seen too that the child was ambidextrous. There were undoubted signs too that one head bordered strongly on the brunette and the other on the blonde type. They could nurse separately or simultaneously. The only difference was that when both nursed at once the appetite was satisfied twice as quickly as when only one of them was fed. The body was that of a girl.

The southern Illinois village, where the judge resides, is cursed by the usual spinster gossip, with prurient prudery and mendacity. One of these, loitering around the keyhole of the lying-in room, hears what she considers suspicious remarks by Dr. Cooper. An attack of cholera infantum, due to an uncleansed nursing bottle, calls Dr. Cooper (during the week following the delivery) to the mansion to attend the monstrosity. On his way back to his office he is waylaid by the female "Paul Pry" aforesaid. Injudiciously, but professionally, hoping to check her inquisitiveness, he informs her that the monstrosity is dead, whereupon she has him arrested for murder. Through the judge's influence and cash the charge is withdrawn. Popular rumor imputes the death of the monstrosity (which is assumed to have taken place) to natural causes. The monstrosity is, however, brought up in the seclusion of the mansion, to womanhood, and carefully trained by a governess sworn to secrecy. The judge, who has not recovered from the shock of the death of his wife and the birth of the monstrosity, finds from growing age and mental infirmity that he needs a private, confidential secretary. A young lawyer named Jack obtains the place, and, in most things, the judge's confidence. The secret of the monstrosity is, however, kept even from him. As the judge has exhibited continuously increasing mental depression from the time of his wife's death, his suicide is not a remarkable outcome. The agitation in the household reveals for the first time the existence of the monstrosity to the private secretary. The heads of the atlodymus have been called Alice and Anna.

Jack falls hopelessly, helplessly in love with Alice. In the innocent frankness of her unsophisticated nature she confesses without a moment's hesitation that his passion is fully reciprocated. Alice and Anna are nearly inconsolable over their father's death. Alice, however, rallies from

the shock as time drags by. She has Jack's love to lean on and feed on. Not so with Anna, who being in a decline before her father's death, receives from that calamity a tremendous downward impetus, and has not the tonic of a lover's helpful sympathy and counsels to brace her. It becomes rapidly evident that she is sinking back to God. She is absolutely certain that she can die without involving the death of her sister. Alice herself also feels sure of this. It seems that some infallible intuition guides them to this conclusion. Since her father's death, and especially since Jack's appearance on the scene, Anna becomes positively anxious to die; there is nothing in the world left for her to live for. However, dearly Alice might love her, the conditions were such that life for herself meant wretchedness for her sister. Unless her sister could be happy, she could not. If she should die, two would be perfectly happy. If she should live, three would be miserable. Her intense desire to die no doubt hastened that event, which occurred about two months after her father's death. The necessity for amputation is evident, but Alice insists on holding the corpse two days to comply with the custom of civilized people. Alice makes a quick recovery after the amputation, and her neck rapidly grows into correct relationship to her body. The outcome is a faultlessly beautiful woman, whom "to see is to love."

Her feelings after her separation from her sister, Dr. Cooper (in accordance with the well-known literary canon) leaves to the imagination, for whose assistance the fact is mentioned that the head of the sister was preserved in alcohol to be buried with Alice in the same coffin.

It must be obvious from this résumé that Dr. Cooper has excellently opened a fertile relatively unworked field of limitless possibilities in fiction. He might have instituted a rivalry between the two heads, or might, with the aid of the New York and Illinois statutes, have had a simultaneous marriage. He, however, preferred to blend the older romantic ideas with his fiction, and skilfully employed the self-sacrifice of Anna to relieve the general realistic gloom of the story. What the possibilities for sensational fiction are in this field is shown by the fact of the case reported years ago by a Brazilian physician, where a double-headed male pyopagus fell in love with a single-headed female syndelphus with a double pair of lower extremities and two sets of pelvic organs. It is hoped, however, that future delvers in this field of fiction will emulate the delicacy of Dr. Cooper in their productions.—*Journal of the American Medical Association.*

Children's Toys.—In an editorial article with this heading, the *Archives of Pædiatrics* for April says:

"One of the most noticeable peculiarities of childhood is a tendency to become attached to certain things and to cling to them most persistently. The young child loves certain nursery songs, and never tires of hearing the mother sing them over and over. He loves certain stories, and listens with minute attention to their hundredth repetition. He becomes attached to

certain toys and persistently goes back to them in preference to the new and more handsome ones, and clings to the old dilapidated doll in preference to the most gorgeous new one. All this is common knowledge to every observer of children.

"An explanation, or a partial explanation at least, is not difficult to reach. A child's mental capacity is yet undeveloped and his comprehension is very small. He knows and appreciates the old familiar doll and its few clothes. The new one, with its closing eyes and jointed limbs and its complex and elaborate dress, is beyond his small comprehension. It tires him as much to investigate and unravel all its mysteries as it does his lawyer father to master an intricate case. So he returns to the old one that he loves and comprehends without effort.

"If the child is content with simple toys, why force upon him those that he does not love so much? Why not follow the plain teaching of Nature and allow him to pass his early childhood in the most simple and contented manner possible?

"It is entirely true that he can soon be educated out of these simple tastes, too often at the expense of his own contentment and the happiness of those about him. When he has once formed tastes for less simple amusements he can not be forced back into the old ways of life. If he becomes accustomed to a multitude of toys and a mob of dolls, and daily expects something new, the time will come when his requirements can not be fulfilled. He has tried and has become tired of every amusement adapted to his own age and of that far in advance of it, and he becomes a burden to all about him.

"Mental development is gradual and is not of a sudden growth. The infant outgrows his rattle and ring, and the young child gradually grows beyond his simple toys. But there are then ready for him more elaborate playthings, and these in turn, as childhood advances, give place to books and games. Each period of childhood, youth and age has its appropriate amusements. The child under judicious management passes from one stage to another and need not lack for entertainment from the cradle to the grave. It is doing him a wrong to force upon him amusements beyond his age and to coerce him into pleasures which properly belong to later years."—*New York Medical Journal.*

The Therapeutics of Literature.—Nearly every physician has the opportunity in his daily work to see the very striking effects of mind over matter; but it is given to the men who deal largely with nervous invalids to estimate the true importance of *printed* matter over mind. As an example, it takes usually but a very few minutes' conversation with the victim of onanistic tendencies who haunts the nervous clinics of our hospitals to elicit the fact that he is under the fearful spell of one of those *chefs d'œuvres* of pamphlet literature that are scattered broadcast by the various institutes which manufacture manhood for the masses. From the patho-

genic suggestiveness of these villainous confections of broken type and tired woodcuts upon paper which is unfit even for shaving purposes, to that of the *éditions de luxe* of the septic novelists, with their handmade paper, deckle edges and illuminated type, the gradation is not so steep as might appear at first sight; and it behooves us in our treatment of nervously exhausted patients to select their mental pabulum with as much care as we do their physical.

It should be our first duty to place the works of the so-called medical realists—and especially of those with ultra-alienistic tendencies—at the very head of the *index expurgatorius*. No phobia in the entire category peculiar to the neurasthenic is apt to be so dominant and so persistent as the phobia of insanity, and it requires no effort on our part to imagine the effect produced upon the wretched victim of this phobia by the ravings of the ideal lunatic of the novelist. The latter is never content to portray the commonplace paralytic dement, in whose feeling of expansion and well-being the poor depressed neurasthenic might find a crumb of comfort, nor the well-behaved paranoiac whose crankiness has definite limitations. The lunacy of the medical realist's lunatic knows no bounds, and the prognosis is always hopeless in the extreme. As to the alleged causes of this mental alienation, we cannot better qualify their absurdity than by saying that they are even more absurd than some of those which appear in the annual reports of certain asylums; unrequited love, for instance, being equally responsible for dementia precox and the most violent manias.

Equally pernicious are the "problem" novels, dealing with subjects which may be classed under the general headings of Sex and Soul. Those of the first class are usually either the products of high-grade moral imbeciles or represent the pot-boiling efforts of struggling married authors with large families, and have an especially injurious effect upon hysterical patients with weakened powers of inhibition; those of the second, in which the writer's doubts and fears as to an hereafter are spread over four or five hundred pages of tiresome drool, are not calculated to soothe the mind of the depressed slave of a despotic nervous system, for in them his tortured soul finds no gleam of hope in the possibility of a future existence, *minus* an inquisitorial nervous organization.

What the jaded neurasthenic needs are stories with plenty of ozone in them and a thrill of out-door life that will make his chest expand in sympathetic emulation, just as we grow hungry and find our salivary glands excreting at the perusal of a mere description of a Dickens Christmas dinner. Even modern literature, in spite of its strong tendency toward coprolalia and verbigeration, abounds in tales of marked therapeutic value. In Stevenson the invalid may, in fancy, find for himself an abundance of adventurous healthful travels. He may journey leisurely inland with a donkey, or, on shipboard, feel the dash of the spray in his face and the roll of the vessel under foot. If he be but a poor seaman, and find inland waters more to his taste, he can make his way by canoe from Antwerp to

Précy and intersperse the journey with sight-seeing on *terra firma*. Tiring of the Continent, he can forsake his cicerone at Précy and, in a twinkling, join forces with Jerome and his three jolly fellows in their merry holiday trip up the Thames; or if, now, a land trip appeal more strongly to him, he has but to mount his fancy upon the "Wheels of Chance" and follow Wells' heroic draper's clerk on his week's bicycle outing through rural England.

We sketch these few itineraries in barest outline, the therapeutic list is too extensive for us to attempt an enumeration. A well-known neurologist, in speaking to his students some time ago on the treatment of neurasthenia, emphasized the fact that a large element of a physician's success in the treatment of this unfortunately only too common condition, would depend upon his being both a good cook and a *gourmet*. We desire to express our hearty endorsal of this sentiment, and extend the suggestion to the preparation of mental food, thereby laying upon the physician the additional necessity of being at the same time a literary *gourmet* and a censor; for with such an accomplishment he has a tremendously effective agent at his command with which to eradicate that evil most deadly to the neurasthenic's peace of mind, the evil of morbid introspection.

As a final piece of advice—and this we wish to whisper in the doctor's private ear—we would suggest, when the patient has regained his normal balance of nervous and mental activity, and the crucial moment is approaching for the presentation of the bill, that there is no better method of preparing the way than by putting into his hands Maclaren's "Doctor of the Old School." To the many who have experienced that acute softening of the heart which a reading of this touching biography invariably produces, the wisdom of such a procedure will at once be apparent.—*Boston Medical and Surgical Journal.*

The Renal Role in Diabetes.—The discovery some time ago that phlorizin would produce artificial diabetes awakening the hope, openly expressed by many, that at last some explanation of the immediate etiology of the disease would be found. A discussion at the Verein für Innere Medicin at the April meeting would not seem to encourage this hope much. Experimental evidence seems to show that in phlorizin diabetes it is the kidney that is at fault; and so a reversal of opinion somewhat in the direction of the old opinions as to a kidney diabetes seems imminent.

A very interesting set of experiments were reported by Dr. Marchuso, which would seem to demonstrate not alone the kidney function in the matter, but also to indicate precisely what special part of the urinary secreting apparatus is at fault. Milk-sugar, it is well known, when injected into the circulation, is excreted as such, the system being unable seemingly to make any use of sugar in this form for any of the nutritional processes that are accomplished in the circulation. If Haidenhain's ligature of the renal arteries, however, be made, then the milk-sugar fails to appear in

the urine ; but if now phlorizin be given the animal, the milk-sugar at once begins to be excreted. As Haidenhain's expedient practically shuts off the glomeruli from any share in any action of the kidney that may take place, it would seem as though it was some influence of the phlorizin upon the cells of the urinary tubules that led to the excretion of the sugar. Experimentally it can be shown by the iron-chloride reaction that phlorizin is present in the cells of the urinary tubules some time after its ingestion, and its presence would seem to result in that lowering of their function which allows the passage of sugar. This, of course, is to revert to an old theory and makes the etymology of diabetes from *διαβαινω* "to go through," true once more.

The whole subject of diabetes is gaining very greatly in interest in Europe. More exact diagnostic methods have shown that slight forms of diabetes are much more common than was thought some time ago. Then, too, all the great clinicians are agreed that the disease is not only relatively but absolutely more frequent than it used to be, and the conjugal form of the disease in which it attacks both husband and wife has attracted a good deal of attention, as possibly pointing to an infectious element in the disease. There are even those who assert that the modern liking for sweets has so reduced generally the power of metabolism for the carbohydrates that the limits of alimentary glycosuria are lower than they were, and the tendencies to diabetes much more outspoken.—*Boston Medical and Surgical Journal.*

The Physician of Napoleon Bonaparte.—"Few students of Napoleonic history," says the *London Chronicle*, "are aware that Dr. Antommarchi, who attended upon Napoleon I. during his last illness at St. Helena, is buried in the cemetery at Santiago de Cuba. He had a brother living in that island, and after the Emperor's death proceeded thither and lived at Santiago, exercising his skill as an oculist gratuitously among the poor. After his death in 1825 a public monument was erected to his memory in the local cemetery." This Francesco Antommarchi, like Napoleon, a Corsican, according to "Chambers' Encyclopædia," did not publish "Les Derniers Moments de Napoleon" until 1826. He emigrated to America about 1836 and died at San Antonia in Cuba, April 3, 1838. He seemed possessed of a disputatious turn of mind and the last quoted authority somewhat sarcastically hints that his celebrity was based entirely upon his intimacy with the great emperor during exile, at whose death he became a beneficiary to the extent of about 100,000 francs.

The Dynamical Superiority of the Bicycle as a Means of Locomotion.—The superiority of the cycle as a means of locomotion on level surface and down hill is universally recognized, but its superiority for all-round work is less clear. It is evident that in a country where steep gradients are the rule the cycle is at a disadvantage, and may even be dan-

gerous, but it would seem that with fairly good roads the cycle still retains a manifest superiority as compared with walking. Approximate calculations yield some interesting figures on the subject which are worth recording. Given a man of average weight, say 64 kilogrammes, walking at the regulation pace of 120 steps to the minute, equal to about $3\frac{1}{2}$ miles an hour, the output of energy at each step he takes is 2.6 kilogrammeters, amounting to 18,720 kilogrammeters per hour, or an amount of labor equivalent to raising two tons one meter. According to M. Bourlet, who has given considerable attention to the subject, a cyclist, also weighing 64 kilogrammes, riding a machine weighing 16 kilogrammes, can cover 14 kilometers an hour with less fatigue than the pedestrian can accomplish his 5.4 kilometers. In so doing he expends energy equivalent to 19,430 kilogrammeters, that is to say, a slightly larger output than the pedestrian, but with this approximately the same output of energy the cyclist accomplishes nearly three times the distance covered by the pedestrian. To cover 28 kilometers the cyclist takes two hours at a dynamical expense of 38,860 kilogrammeters, while to cover the same ground the pedestrian requires five and a-half hours, and expends 102,960 kilogrammeters. There is consequently an economy of both time and strength in cycling. In the French army the day's march for the infantry is fixed at 30 kilometers, while that of the military cyclist is 100 kilometers, a striking difference! So far we have only considered the expenditure of energy on level ground, but on ascents both the pedestrian and the cyclist, in addition to the work required for progression on level ground, have to raise the body-weight, to which, in the case of the cyclist, must be added the weight of the machine. According to M. Bourlet, the man on foot, on a road rising two centimeters per meter, incurs an extra expenditure of energy equal to 6,910 kilogrammeters per hour, while the cyclist, progressing at the reduced speed of ten kilometers an hour, incurs about the same extra expenditure of energy. If the speed be still further reduced, the advantage is positively in favor of the cyclist, in fact it results from these calculations that it is undesirable for the cyclist to dismount on gradients having less than 16 centimeters per meter, on condition that he does not ride too rapidly, and that he uses a moderately high gear. As it is the exception for main roads to be constructed with a gradient of more than four per cent. it follows that a 65 to 68-inch gear is well within the limit of comfort. The advantage of the cycle on the down gradients is too manifest to need demonstration, so that from every point of view the superiority of the cycle over the legs for purposes of progression is incontestable and considerable.—*Medical Press.*

The Tenth Annual Meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee will be held at Birmingham, Ala., Tuesday, Wednesday and Thursday, October 25, 26 and 27, 1898.

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LECTURE.

OVARIAN TUMOR; OVARIOTOMY; SPECIMEN OF EXTRA-MURAL AND INTRA-PELVIC FIBROID AND CYST OF THE APPENDIX.[1]

BY E. E. MONTGOMERY, M.D.,

Professor of Gynecology in the Jefferson Medical College; Gynecologist to Jefferson and St. Joseph's Hospitals; Ex-President Philadelphia Obstetrical Society; Ex-President Pennsylvania State Medical Society.

GENTLEMEN: This woman is twenty-eight years of age, single, lost her father from pneumonia, mother from pulmonary tuberculosis, and has four half brothers and a half sister living, in good health. She has had measles, mumps and pertussis. Puberty occurred at ten, menstruation not regular for two or three years, but subsequently was until the present trouble. The flow continued for three days, with pain in the back. Last September she had almost constant backache, worse at menstrual periods, and pain in the ovarian region, more marked on the right side. From September, 1896, until the present time, March of 1897, the menstrual flow has been more profuse with a foul odor. During February she suffered hemorrhagic discharges twice, followed for three days by a foul leucorrhœal discharge, bowels are constipated, appetite poor, urine upon examination presents a specific gravity of 1024, acid, containing neither albumen nor sugar. Last September this patient went to a physician and announced that she feared she was pregnant, that her abdomen was enlarging, and the physician from the symptoms present, and the size of the abdomen, was also inclined to coincide. As a result of the suggestion of this probability she went into an institution to await confinement, but as it did not occur in due time she concluded to have further investigation. Upon examination, we find this tumor to be an ovarian cyst, that pregnancy has not existed. Had the

[1] Clinical Lecture delivered at the Jefferson Hospital.

patient subjected herself to a subsequent examination by her physician, the condition would undoubtedly have been determined, but, supposing that she was pregnant, she has kept herself in seclusion. This case illustrates the difficulty sometimes experienced in arriving at a definite diagnosis, and the importance, where in doubt, of securing a subsequent examination. This patient has been subjected to one examination, the result of which confirmed her fears that she was pregnant. I have no hesitancy in saying that this is an ovarian cyst, for the reason that there is distinct fluctuation. We might have fluctuation from an ectopic gestation. We have, however, in this patient a history of menstruation more or less regular. It is true, it has been profuse during this time, but this sac is closely attached to the uterus, so closely attached that the return circulation in the side of the uterus has been affected, consequently we have an increased flow. We have various forms of disturbance of the menstruation in ovarian growths. In many cases of ovarian growths we may have amenorrhœa. It is not impossible, however, to find patients who have a continuous flow. I saw a patient in my office yesterday with a tumor in the abdomen, reaching the level of the umbilicus, in which there is a history of having hemorrhage in January and a continuous bloody flow ever since. This patient might be supposed to be a victim of ectopic gestation, but that the sac is plainly that of an ovarian cyst. The uterus has been pushed to the opposite side and pressure made upon the parts to such an extent as to interfere with the return circulation; hence the bloody flow arising from pressure just as it would in an ectopic gestation. This patient has undergone various methods of treatment with a view to decreasing the amount of hemorrhage. You can readily understand, however, how ineffective they would be, as, the return circulation being interfered with, and the arteries still pumping the blood into the uterus, there is nothing to prevent the continuation of the flow until the tumor is removed. In this patient we have distinct fluctuation, enlarged from one side of the abdomen to the other, showing it is a large cyst, probably a single cyst. This tumor is in front of the uterus, the uterus being pushed back and below the growth. We thoroughly cleanse the abdomen, which you see is here symmetrically developed, possibly a little larger on the left side. We cut through the skin, aponeurosis, muscle and fascia down to the peritoneum. This we pick up and cut between the forceps, when at once the glistening surface of the ovarian cyst is exposed. The cyst is punctured with a trocar and its contents drawn off. If you have not at hand a trocar you can make a puncture in the cyst with a knife and slip into it a glass irrigation tube, or, making the puncture with a knife, catch the sides of the puncture with forceps and draw it out of the wound, enlarging it, permitting the fluid to escape without soiling the abdominal cavity. Having drawn out the sac, which is a single cyst, the pedicle is ligated by passing a chromic catgut ligature through its center and tying it in two portions. Having it tied we cut off the cyst, examine the surface to see that there is no bleeding, cut the ligature short

and drop it back. We now examine the other ovary to see that this is not enlarged. I find, however, it contains quite a good sized cyst, so we will proceed to remove it. The cavity is thoroughly irrigated with a normal salt solution, not being particularly careful to remove it all, as the salt solution remaining in the peritoneal cavity is readily absorbed. The wound is closed with continuous silkworm-gut suture for the peritoneum, aponeurosis and muscle, and subcutaneous for the skin, bringing out the ends at either angle of the wound, securing them by compressing shot over perforated plates. The patient will be kept in bed, perfectly quiet. There is no reason to expect her to suffer from shock, her pulse is without doubt good, as there has been no loss of blood and the patient looks well. We have removed both ovaries because the second was also enlarged and it contained a good sized cyst. The ovary is about three times its normal size. In connection with this case I will read you the history of a patient who underwent an operation of a similar kind this morning.

Cyst of the Appendix.

She was fifty-two years of age, married, with her mother, one sister and two brothers living, a brother died of variola, and one of scarlatina. There is nothing in the family history of the patient that would affect her present condition. She began to menstruate at fifteen, periods regular, lasting three to four days, sometimes painful. She had nocturnal incontinence of urine which persisted until after the birth of her first child; was married at twenty-one, one year later gave birth to twin daughters, two subsequent children and one miscarriage; the last birth took place twenty-three years since. Menstruation was regular until a year ago, since which time it has lasted from one to three weeks. For the past five years she has complained of pain in the pelvis and abdomen after doing heavy work, and has had to void urine more frequently, usually from six to twelve times during the twenty-four hours; she complains of weight and pressure in the abdomen, marked constipation, a variable appetite, and has been gaining in weight. She has been unable to continue her work on account of pain. The abdomen of this patient was quite large, and upon examination, we find the

cervix about two inches above the pubic bone, while the pelvis was filled up, or occupied, by a large mass which extended to within an inch of the vulva. The mass could be felt above the umbilicus on the right side. We recognized that the patient had a fibroid tumor. I show you the tumor, which contains one mass situated to the right side. High up, near the central portion of the mass is the cervix, and below it a portion of the tumor which projected into the pelvis. This tumor had dissected between the leaflets of the peritoneum so that it was necessary to ligate the broad ligaments on either side and then split the fascia before we could turn out this mass. This is an extra-mural tumor, and cannot be said to be subperitoneal for the reason that it did not project against and is not enveloped by the peritoneum. This mass produced marked discomfort, making pressure as it did upon the rectum, and interfering with the evacuation of the urine. After the fibroid growth had been removed, while making the toilet of the peritoneum, a mass fell into the pelvis from above, which at first sight I took to be a portion of intestine filled with hard fæcal matter. Upon examination, however, I found this mass (see illustration). It is some five and one-fourth inches in length, four and three-fourths in circumference. It is a cyst of the appendix. At its upper part you will see a portion of the cyst, the surface of which differs from the remaining, which was covered by the mucous membrane of the bowel. The muscular wall of the bowel was cut away from this cyst without opening the calibre of the intestine, the mucous membrane remaining intact; the muscular wall was then sutured together over the end. The presence of this cyst of the vermiform appendix was not suspected. Considerable care had to be practiced in this patient in closing the peritoneum over the pelvic wound on account of the depth to which the tumor had projected. There is a possibility, of course, that fluid may accumulate deep in the pelvis, but if so it can be readily removed through the vagina, so drainage was not practiced. Small cysts of the appendix are not rare, but it is exceedingly rare for them to attain to the size of the one I have shown you to-day. Virchow reports a case in which the appendix reached a weight of two pounds.

MEMOIR.

WILLIAM PEPPER, M.D.

Read at the Fifteenth Annual Meeting of the American Climatological Association at Maplewood, N. H., August 31, 1898.

THE subject of this sketch was one of the founders of the American Climatological Association, and as President guided its deliberations at the meeting held in Philadelphia in 1886. At this meeting the official and formal address delivered by him had for its title "Phthisis in Pennsylvania." The members may recall the comprehensive study of the subject presented by the rare and excellent model he laid down for future workers in similar fields. It is not to be forgotten that the detail work and enormous labor required, as well as suggestions in its conception, were due to

our present efficient Secretary. As was customary with the late Dr. Pepper he was always willing to give credit to those who were associated with him in his work, and in this instance acknowledged his indebtedness to our Secretary by coupling his name with that of his own when the article was published. Our Ex-President, a foremost founder whose loss we deplore, was for a long time interested in climatology. He had prepared as long as twenty years ago most comprehensive plans for a work in this department of medical science. He had arranged to have data collected from each county and every State which would throw light upon the climate of its

region including a study of the atmosphere, the soil, the vegetation, the animal life, and all other physical matters relating to climate. Another of our co-workers was associated with him in this work, and I believe Dr. Daland has published the results of many of their conjoint investigations. On scientific lines—which we climatologists appreciate—the late Dr. Pepper also engaged in an exhaustive study of the mineral springs of America. In addition, other contributions to our Society's transactions were made by him, and his voice was often familiar in its deliberations.

The work which appeals to us as members of this Society was a very small portion of the labor which our fellow-member carried on in strictly professional lines, and when both are added together the sum represents but a fraction of the labors of his busy and useful life.

Receiving the degree of Doctor of Medicine in 1864 he at once became resident physician to the Pennsylvania Hospital. In this capacity he published a paper conjointly with Dr. Meigs on the subject of "Pigment Formation and Deposition in Malaria," at that day an advanced contribution in pathology. He at once became interested in the study of pathology, and the first excellent descriptive catalogue of the rich museum of the Pennsylvania Hospital is testimony of the enthusiasm of the worker. His studies in this line and his energy and zeal attracted to him the late distinguished Dr. J. Forsythe Meigs, then physician to the Pennsylvania Hospital and the leading practitioner in medicine in Philadelphia. He associated with himself the subject of this sketch in the preparation of a new edition of his work on "Diseases of Children," and from this time until the death of Dr. Meigs the combined production of the authors was the leading work on this subject.

One of the early students in pathology of his alma mater, naturally he should have been selected to deliver the first lectures on "Morbid Anatomy" in the University of Pennsylvania, which for two years he conducted with rare ability. During this time he took active interest in the Philadelphia Pathological Society. He was a frequent contributor to its proceedings, a member of its most active committees, and for three years (1873–1876) was its energetic president. He never lost interest in pathology, as his varied contributions on this subject show, while the power and clearness of his later lectures, both clinical and didactic, were enhanced by the wealth of his pathological knowledge.

It is interesting to note in passing, the number of clinical and practical workers in medicine who in their earlier days were zealous students in pathology. In the city of his birth alone we can point to the elder Gross as the foremost pathologist of his time, and it is now a mooted question whether his reputation will not be greater for the contributions he made to pathology than for those he made to surgery. Likewise we have Da Costa, in truth the first organizer of the Pathological Society, and one of its most active workers, later our brilliant clinician.

I have said Dr. Pepper's interest in pathology continued to the last.

So clearly did he appreciate the relations of pathology to clinical medicine that in the last year of his life he founded and endowed the William Pepper Clinical Laboratory for the purpose of studying the pathological problems in clinical medicine.

In 1866 the late Dr. Pepper was elected physician to the Philadelphia Hospital, and at once threw himself with his accustomed ardor into clinical studies. His practical mind delighted in practical studies. Pathology lost the student that clinical medicine gained. Epidemics of typhus fever and of relapsing fever attracted him into exhaustive studies. The prosecution of his studies in typhus fever were so closely conducted as to permit him to be infected by the disease. Both studies enabled him to make valuable contributions to the literature of these infections embodied in his papers in the System of Medicine, and in his work on the Practice of Medicine.

At this time two friends, whose brief career was an earnest of what would have been possible had life been spared them, were associated with him; the one, Dr. John S. Parry, well known for his clinical papers on "Rachitis," on "Extra-uterine Pregnancy" and on "Relapsing Fever," died of tuberculosis; the other, Dr. Edward S. Rhodes, died of organic heart disease. Always delicate, his strength did not allow full play of his talents. The dainty and delicate biographical sketch of him is one of the best pieces of work Dr. Pepper ever did. Dr. Pepper's life at this time was influenced by the gentleness, kindness and courteousness of his brother, Dr. George Pepper, whose untimely death robbed Philadelphia medicine of what bade fare to be a shining light. Every one acquainted with Dr. Pepper knows with what loving tenderness he frequently referred to his brother's character and talents.

In 1870 Dr. Pepper was made Lecturer in Clinical Medicine and in 1874 Professor of that branch in his alma mater. From this time forward he threw his whole energies into clinical medicine, and, up to the time he was elected Provost of the University of Pennsylvania, pursued his studies with energy and ability. Frequent contributions in the form of lectures and monographs appeared, notably his paper on the Catarrhs, on Diseases of the Right Iliac Region, on Pernicious Anæmia and on Leucocythæmia. His lecture room was crowded, and there was always a waiting list for his private course in physical diagnosis. His medical labors did not culminate with his election of the provostship, although they took on a different aspect coincident with his labors as organizer of medical thought and medical effort. Thus in 1884 appeared the classic treatise, "A System of Medicine," which he edited; and in 1890 he gathered around him a number of associates who contributed to his last systematic work, "The Practice of Medicine." In the meantime many able papers were published by him in conjunction with Hare, Packard and Griffith, and later more extensively with Stengel.

In 1870 events of great significance aroused in the late Dr. Pepper

traits dormant because of the lack of opportunity to display them. The removal of the University to West Philadelphia and the recognition by Agnew, Pepper, Wood, Norris and Tyson of the necessity for a hospital in the normal plant of a medical school called for new work. As chairman of the Building Committee, by his personality, his tact and his force he managed legislative bodies, lay the wealthy under tribute, and organized the alumni to potent work. In 1876 he was Medical Director of the Centennial Exposition, for the management of which he received a knighthood from the King of Sweden. The cause of medical education found in him a tireless champion, and addresses, pamphlets and organizations followed on until he saw the passing of the old. Other demands upon him show the receptivity of his mind, his broad culture and abundant resources. Then followed his election to the provostship, and from this time on medicine lost a devotee whose purpose singly had been devoted to this cause. Science, education, his alma mater, the State of his birth gained a champion whose ardor and energy never paled until the hour of his death. His friends truthfully claimed for him a place among the first teachers and clinicians of his day, a position which he reluctantly relinquished. Henceforth the multiplicity of his labor appals. We have referred to the medical labors; others not relevant to this organization need not detain us, save that mere mention indicates the genius of the man.

He reorganized entirely the University of Pennsylvania and established five new and most suceessful departments. He threw his whole soul into the University Extension movement, was the first president of the local, and later of the national, society. He assisted in the organization of, and was the first president of the American Archæological and Palæontological Societies and the Philobiblon Club. He was president of the Museums of Science and Art of the University and of the Commercial Museums of Philadelphia. He organized and was president of the Free Library of Philadelphia, an organization which places in circulation more books than any similar library in the country. Lately he had been vice-president and leading spirit of the American Philosophical Society and was an enthusiastic patron of the Oriental Society. He assisted in the organization of the Congress of Physicians and Surgeons and was chairman of the first Business Committee, and later its president. He was also one of the founders of the Association of American Physicians, and later president of this distinguished body. He was the founder of the Pan-American Medical Congress and its first president.

The late Dr. Pepper was born August 13, 1843. He was the son of Dr. William Pepper, former Professor of Medicine in the University of Pennsylvania. He died July 18, 1898, of angina pectoris. A widow and three sons survive. In him both tact and talent were well combined, and to both were added great industry and energy and a personality of extreme force and attractiveness. J. H. M.

ORIGINAL PAPER.

THE PLACE OF HYDROCHLORIC ACID IN THE TREATMENT OF DISEASES OF THE STOMACH.

BY BOARDMAN REED, M.D.,

Philadelphia, Pa.

THE time has come for a definite and precise statement of what hydrochloric acid can do in the treatment of stomach diseases—when and how it is useful as well as when and how it can be harmful.

Riegel in his recent work[1] very pertinently remarks: "While formerly HCl was prescribed in nearly all dyspeptic conditions, its employment has of late been essentially limited, since it has been recognized that it is by no means true, as was once assumed, that in almost every form of dyspepsia a lack of HCl exists." There is much other testimony to the effect that even among the aggravated stomach conditions for which the advice of a specialist is sought, an excess of this acid is very often found in the gastric juice. Could all cases of gastric derangement, including the earlier stages of catarrhal affections, be brought to the test of a chemical analysis of the stomach contents, it is probable that those with either a normal or excessive secretion would be largely in the majority. And none of these require the administration of HCl as a medicine. Indeed, it is capable of doing pronounced harm in all such cases. We should expect, *a priori*, that to introduce this active drug artificially into stomachs which already secrete it in too large quantities, would intensify the depressing and painful symptoms of hyperchlorhydria. Experience has abundantly shown that this result usually follows in such cases when the drug is administered in considerable doses.

The well-known antiseptic power of HCl might tempt one to give it in the numerous cases in which, despite the presence of a normal percentage of this acid in the gastric juice, the patients suffer from eructations of gas as a result of fermentation in the stomach, and (as still more frequently happens in cases with a normal or over-abundant secretion of gastric juice) are plagued with a large amount of intestinal flatulency. Indeed, this remedy is administered every day by excellent physicians in these conditions, not after having actually learned, through a gastric analysis, that a full proportion of HCl is secreted, but upon a venture, assuming that there may be a deficiency, and if not, that in any case the drug is antiseptic and must do some good. Just here is where the mistake is made. To administer HCl in cases in which it is not deficient, is not only to do no possible good, but generally to do harm, and for these reasons: This drug, as has been pointed out by the writer in previous papers,[2] acts even

in small doses as a decided stimulant to the gastric glands, and when long continued rarely fails to increase largely their activity, except in gastric atrophy or cancer. This property, which renders it so useful as a remedy when the gastric juice is insufficiently secreted, becomes a cause of injury in the opposite condition. Therefore, HCl taken into a stomach already fully supplied with it, and the stomach contents after meals being thus as acid as nature intended them to be, must not only produce at the time an excessive degree of acidity, with all the harmful results especially to digestion in the small intestine which this implies, but, if administered often enough, may easily set up a more or less permanent hyperchlorhydria.

But, it may be urged that we might risk some overacidifying of the gastric juice and the resulting impairment of intestinal digestion if by this means we can lessen fermentation in the stomach. Unfortunately, however, in the cases in which there is no deficiency of HCl, very little, if any, antiseptic action can be demonstrated as a result of its administration. In the acid gastritis described by various authors in Germany and France, and especially in recent treatises by Hemmeter[3] and by Van Valzah and Nisbet[4] in this country, a condition which my own experience has shown to be very common and the one most often present when a normal or excessive proportion of HCl is found associated with much fermentation, the gas-forming bacteria seem to acquire a tolerance for the HCl and to thrive in spite of it. At all events, the fact that even a very great excess of HCl in the human stomach does not prevent fermentation has been made familiar to the writer by a large number of observations. Riegel has lately called attention to it without attempting to account for it. In his work already referred to he says:

"That the presence of free HCl in the stomach contents is no hindrance to the development of an abundant gaseous fermentation is a long since established clinical fact, which, through the researches of Kuhn and Strauss, has been given a further support. It has been proved that the HCl of the gastric juice under the existing conditions has absolutely not the disinfecting properties against the yeast fungi which has been established for it in a pure solution of the drug or in artificially prepared gastric juice, but, on the contrary, the view always maintained by us has been confirmed—that when stagnation exists the preferred soil for the gaseous fermentation is afforded by just those cases which show a normal or overlarge amount of HCl."

Some experiments recently reported to the Hospital Medical Society by Toinot and Brouardel, and published in the *British Medical Journal*, show that the bacillus coli can be made to acquire a tolerance for arsenious acid even in strong solutions. They succeeded in training this bacillus to grow well in bouillon containing three grams to the liter of arsenious acid.

Then why may it not be that bacteria in the stomach gradually become accustomed to the presence of HCl until finally even a large excess of it does not affect them? At all events the gas-forming micro-organisms are

found to flourish in the stomach even when there is present a very large excess of HCl; and in these cases when they have become chronic, it is the rule to have grievous complaints of flatulency, both gastric and intestinal, with an endless train of nervous symptoms, including, especially, mental depression and insomnia, along with, usually, constipation.

What has already been said as to the contra-indications for HCl tells, in a measure, where and how it can be helpful in the treatment of gastric affections. There are a few prominent gastro-enterologists who seem to place little reliance upon this drug in any case, but the writer has found it of exceeding value not only as a palliative in cases of atonic dyspepsia, but also as a reconstructive tonic in cases of chronic gastric catarrh, which have not yet progressed to entire atrophy of the glands. In fact, the results which have followed its administration in my practice (usually in combination with pepsin) fully warrant me in assigning to it in the therapeutics of all the stomach diseases characterized by hypopepsia (except cancer and atrophy) a place second only to diet and the mechanical treatments including especially abdominal massage.

My note-books contain the histories of a large number of cases in which the administration of HCl for from one to four months, more or less continuously has been followed by a most notable and apparently permanent increase in the secretion of the gastric glands. In the majority of my cases massage and the use of pulleys or other suitable exercise for the strengthening of the trunk muscles, were also employed as a regular part of the treatment, and the results in these cannot, of course, be cited as proving the efficacy of any one of the curative measures relied upon. The cure of the patient having been naturally the first consideration, the treatment has not been limited to any one agency, no matter how valuable. A large amount of evidence has thus been accumulated which, it must be admitted, is inconclusive in so far as concerns the relative value of the various remedies used.

But, fortunately for the purposes of this paper, some of my hypopeptic patients found it impracticable to have massage, and, at the same time, were unable, for various reasons, to carry out with any regularity the directions as to methodical exercise, and the marked gain in digestive power acquired by these must be credited mainly to the medicine taken.

Wegele[5] and Hemmeter[6] among recent authors bear witness to the powers of HCl as a stomachic or stimulant to the peptic glands. Hemmeter also quotes Riegel, Reichmann and Mintz as having reported cases of achylia gastrica in which the restoration of the secretion of HCl was effected by a more or less prolonged dosage with the same acid. Hemmeter gives twenty drops of the diluted HCl in appropriate cases in two ounces of water every half hour, beginning fifteen minutes before meals and continuing it till half an hour after the meal. He has frequently seen excellent results from this method and believes that the motor function of the stomach is favorably influenced as well as the glands, a view which my

own experience confirms. My practice has been to give much smaller doses. I direct the patient usually to begin with a dose of four or five drops of the dilute HCl given after each meal in this way: The amount prescribed, which is gradually increased if necessary up to ten, or exceptionally even to twenty drops, is added to half a goblet of water which the patient is directed to take in small sips at frequent intervals during an hour or an hour and a half. In cases of complete or nearly complete anacidity the sipping of the diluted acid is begun immediately after the meal, but in other cases, not till the meal has been over for half an hour. In this way the amylaceous portions of the food are given time for the action of the saliva. I was led to adopt this gradual method of administering the acid through having observed a number of cases with absence of free HCl in which the patients complained of a marked burning in their stomachs after taking quite small doses of the remedy. This apparent intolerance of the drug was overcome entirely by having it taken gradually in small sips, and the results eventually were quite as gratifying as in other cases in which no such disagreement had occurred.

Except in those cases where, in spite of deficient or absent HCl secretion, there had been demonstrated a normal proportion of pepsin or of pepsinogen, I have usually combined with HCl a moderate amount of a good preparation of pepsin in the form of glycerole. When, owing to the exigencies of a busy practice, the quantitative tests have included the total acidity and the amount of free HCl only, pepsin has generally been added to the mixture, and in a very large proportion of such cases the digestive power has decidedly increased, insomuch that the patients after a time were able to do without stomach remedies.

In the cases, reports of which are given below, no very severe restrictions of the diet were imposed, though hot or fresh bread, fried articles, sugar, nuts, vinegar, the sourer fruits, especially uncooked, and shellfish except oysters, in their season, were excluded, and the patients were enjoined to eat slowly, using their saliva to moisten all starch foods and to drink either nothing or very sparingly at meals.

Case I.—Lady, aged thirty-six, resident in New York, while on a visit in Philadelphia, came under my care on account of chronic indigestion, with much fermentation, constipation, anæmia, irregular menses, impaired sleep and cardiac palpitation. She gave a history of having suffered in a similar manner for several years and of having had more or less trouble with her stomach for twelve years. Had formerly had much pain after meals, and for this had been directed to take, freely and continuously, tablets made up mostly of sodium bicarbonate, about five grains in each. She began by taking one every hour, or sixteen a day, but finally reduced them to eight daily. These were continued with little or no medical oversight for three years, until they markedly disagreed by causing nausea. External examination, when this patient came under my care in December, 1896, showed the right kidney to be loose and very movable and the stomach dilated, extending from the normal limit above to several inches below the level of the umbilicus, with tardy expulsion of the contents. The liver area was somewhat smaller than normal, but the other organs presented nothing abnormal.

Analysis of the stomach contents after a test breakfast showed a total acidity of only 24 and an entire absence of free HCl. Rennet test, no result in twelve hours. Indican in excess in urine. My first prescription contained in each fluid drachm ♏ x of dilute HCl with ♏ xv of glycerole of pepsin, ♏ 1¼ of Tr. Nuc. Vom. and ♏ ½ of carbolic acid. A teaspoonful was added to half a glass of water and, beginning half an hour after meals, the patient sipped the entire solution during the hour following.

Shortly after beginning treatment she was attacked with a severe diarrhœa, which necessitated a different line of medication for a week or more. Then a new digestive mixture was given, with the dose of HCl reduced one-half and the other ingredients, except pepsin, omitted.

February 25, 1897, the patient came on from New York and reported improvement in nearly all ways. She had continued her last mixture. The stomach analysis now showed T.A. 40 and free HCl .0146. Less fermentation and better sleep. No excess of indican in urine. The pepsin was now left out of the HCl mixture and a few drops of carbolic acid were again added to it. Massage of the abdomen was tried but proved too exciting to the menstrual function, the first treatment having brought on the flow, out of time and in excess.

Since the above date the patient has seen me at long intervals only. October 7, 1897, she came on to Philadelphia and reported that she had continued the HCl mixture until six weeks previously and considered herself then practically well. She had gained twelve pounds in weight, presented a good color and clear tongue and had lost most of her symptoms except the constipation.

She afterward fell ill with grip in New York and came under the care of Dr. Lockwood in that city on account of this disease and its complications. She was confined to her bed or her room there a large part of the winter, but at the end of it all her physician wrote me, under date of March 28, 1898, that a gastric analysis showed total acidity 50; free HCl 22 (equal to .080) and combined HCl 22.

She reported herself to me again April 4, 1898, and looked well, considering her recent long illness. There was improved gastric motility, but her stomach was still greatly enlarged, she having declined intra-gastric electricity and abdominal massage, the two surest remedies for that condition.

Case II.—Lady, aged forty, wife of a physician in a neighboring city, consulted me March 22, 1897, on account of paroxysmal attacks of indigestion, from which she had suffered for twenty-six years. They were characterized by violent eructations of gas and seemed to be caused by some unusual emotion or excitement. Formerly they occurred once in several months and were not followed by any specially unpleasant consequences, except nausea and some feeling of oppression. But within the last two years there have been three serious attacks of the kind, which were followed by colicky pains and jaundice, with pruritus, lasting a week. These attacks also followed some marked nervous shock or emotional excitement. One occurred just after her father's death. Between times she is said to have had usually fair digestion, with no pain or discomfort after meals and very little eructations. Her bowels have been fairly regular as a rule, but she is very constipated always at the time of the attacks. The latter, of late, have sometimes recurred every day for several weeks, accompanied by severe colicky pains and vomiting. Ingesta, taken two or three days before, have occasionally been vomited. Color, pale, and looks dejected. Physical examination: Lungs and heart normal. Liver enlarged. Stomach, slight displacement downward along with atonic dilatation; the upper boundary was one to one and a-half inches too low and the lower boundary between two and three inches below the level of the umbilicus. The

kidneys not palpable. No tumor. Gastric analysis after test breakfast: T.A. 12; free HCl entirely wanting. Small amount of mucus. Diagnosis: Chronic catarrh of the stomach and duodenum. Prescribed: ℞. Tr. Nuc. Vomic., f ʒij; Ac. hydrochlor. dil., q. s. ad f ʒj; Sig. 10 to 15 drops in half a glass of water after meals. Diet to be as unfermentable as possible.

Two months later patient reported improvement. No further attacks.

August 6th of same year her husband reported that she had been obliged to continue the mixture regularly. Every attempt to omit it was followed by a return of indigestion. October 14th, patient recovered a few days ago from one of her severe attacks, which lasted two weeks, with eructations, pain and constipation.

Gastric analysis: T.A. 18; free HCl, none; mucus, very small amount. Prescribed: ℞. Ac. hydrochlor. dil., f ʒvj; glycerol pepsin, q. s. ad f ʒij; Sig. Ten drops in half a glass of water, half an hour after meals, by sips. Every other week to take the following: ℞. Argent. nitrat., gr. x; Ext. taraxaci, ʒj; M. et. ft. pil No. LX.; Sig. One after each meal.

April 21, 1898. Has taken both medicines, as above ordered, the HCl mixture continuously and the silver half the time. She now has a good color and is very much stronger. No further attacks. Gastric analysis: T.A. 40; free HCl .041 (nearly normal); mucus, a small amount. The lower border of the stomach was found to be near the level of the umbilicus.

Case III.—Lady, a teacher, aged twenty-three, referred by Dr. Samuel Bolton, of Philadelphia, Oct. 6, 1897. Her chief complaint was headaches and vomiting every few days with much nausea and occasionally vomiting especially evenings between the attacks. There was also stubborn constipation and feeling of load in her stomach after meals. Organs generally found healthy except stomach, which was moderately dilated, extending down to half an inch below the umbilicus with delayed emptying. The gastric analysis showed only a very small amount of free HCl—.014 though the total acidity was 66, representing largely fermentation products. There was much mucus in the stomach. I advised lavage and the combination of HCl and pepsin as the main treatment. On account of marked starch indigestion, she also took Taka-diastase for a time, and Roncegno water was taken for some weeks to bring up the quality of the blood.

On April 9, 1898, I found the stomach much retracted in size, the lower border being one and a-half inches above the umbilicus, and the gastric analysis showed T.A. 56; free HCl .075 (that is a normal secretion); mucus a very small amount. She had had no severe headache with vomiting for three months, and had regained a normal color, though her gastric catarrh is not yet entirely well.

Case IV.—Gentleman aged sixty-six, consulted me July 21, 1897, in Atlantic City, on account of chronic indigestion, from which he claimed to have suffered nearly all his life. Painful accumulations of gas and obstinate constipation were prominent features. The external physical examination revealed nothing abnormal. Gastric analysis: T.A. 16; free HCl wanting. Starch digestion good. Mucus very small amount. He was placed upon HCl and pepsin in the usual way. He has since seen me several times on account of his wife, but reported that he himself was doing so well on the digestive mixture as not to require any further medical assistance.

December 16th, he was seen and was then feeling well. On April 22, 1898, his wife called to consult me for herself and reported that her husband had been continuing his HCl and pepsin, though less regularly, having virtually recovered his health. He had taken no other medicine except a little nux vomica during the first few weeks, and a laxative at night. He had not had massage, except such kneading over the abdomen as he had been able to give himself.

In this case no opportunity has been offered of testing the stomach contents again, but it is highly probable, from the decided improvement in the patients' digestion as well as in his general health, that the gastric glands are now doing much better work.

Reports of a number of other cases might be added, in which, under a treatment consisting either entirely or mainly of the administration of HCl and pepsin, conditions of apepsia or hypopepsia improved more or less markedly, the gastric secretion having returned to the normal. Without claiming that such fragments of clinical experience can be accepted as demonstrating beyond question that HCl stimulates the gastric glands, it must be admitted that a strong presumption is thus established as to the existence of such an action.

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TALKS TO GENERAL PRACTITIONERS.

A polyclinic in print embodying simple lessons in so much of the newer methods and procedures in the specialties as it is important and practicable to teach in this way to physicians generally; and the occasional rehearsal of old but neglected truths.

SOME CLINICAL POINTS IN THE ADMINISTRATION OF ETHER.

BY CHARLES L. LEONARD, M.D.

THE fact that ether is the safest drug for continued general anæsthesia makes it no less a drug. This should be remembered in its employment, and the necessary amount for the end desired should be administered and no more. The bad practice of "soaking" a patient with ether, because it is a safe anæsthetic, is no more reasonable than the use of any other drug in quantities greater than the actual case demands. The effect on the condition of the patient after operation is marked, and careful surgeons have learned that much of the shock following operations is often the result of the action of this drug in excessive amounts. Sometimes during prolonged administrations this effect can not be entirely avoided, but skilful administration reduces it to a minimum. The object should always be to give as

little ether as will keep the patient fully under its influence. In the average case it should produce no notable effect on the pulse, respiration, or temperature.

The ease with which a patient is etherized depends often on the confidence he has in the skill of the anæsthetist. You can not gain his confidence by force. Do not force a patient to take an anæsthetic, persuade him. Appeal to reason and common sense and not to force.

Tell him that its effect and result differ very little from the common overdose of whiskey, that it is more rapid in action, but that the amount is governed by one not under its influence. Ask a timid woman, who fears to lose consciousness, if she does not do so every night when she goes to sleep, and point out the fact that it is because she is unaccustomed to this method of producing sleep that she fears it. Such gentle reasoning joined with kindness, will gain the confidence of your patient and the psychical effect will be seen in the ease with which the patient goes to sleep, while a pleasant word or an anecdote will be reflected in the smile of the excitation stage, and may be all of it.

After you have gained your patients' confidence do not destroy it by choking them with the first breath of ether vapor. Ask if there are any false teeth or foreign bodies in the mouth, and have them removed. Explain to the patient that they may feel choking or smothering sensations, but that they will pass off before they lose consciousness. Ether is an irritant in its first action on the mucous membrane and the throat should become accustomed to it before it is given in large quantities.

Put a little ether on the gauze pad or other inhaler and hold it at a short distance from the patient's mouth so that the vapor will not be too concentrated. Or place the gauze pad or other inhaler over the patient's nose and mouth and begin drop by drop. As soon as the irritation of the mucous membrane wears off, the period arrives when the patient, though fully conscious, breathes the vapor comfortably; this is the time to make it as concentrated as possible, for now without danger the patient can be brought rapidly under its control, and the excitation stage cut short and generally entirely avoided. The cases are very rare where force should be necessary to control the patient, unless an alcoholic.

The second stage of relaxation which follows, is ushered in by the normal ether snore, which is the result of the relaxation of the pharyngeal muscles. Up to this time the patient can understand what is said and is capable of voluntary motion. Now voluntary motion is impossible, the patient lies relaxed and limp, and is only capable of reacting to reflex stimulation. The power of reacting to reflex stimuli differentiates between this stage of relaxation and the following one of surgical anæsthesia. The earlier stage is free from the dangers that arise in the latter. When reflex stimulation is possible the patient is in no danger from an excessive amount of ether, or its action on the brain centers. Whenever these dangerous symptoms seem to be present, test the reflexes; if they are

present the patient is not in the last or anæsthetic stage and the annoying symptoms will disappear by giving more ether. If, however, the reflexes are absent, the ether should be stopped, the patient carefully watched and any indication of danger promptly met.

The stage of surgical anæsthesia is produced for more than one reason. Primarily it saves the patient from feeling pain, for when the reflexes are abolished all sensation is gone. In addition the abolition of reflexes prevents reflex inhibitory stimulation of the vagi nerves through the sympathetics, from the cutting of sensory fibers in the skin. There is then this twofold purpose in the production of surgical anæsthesia and the attainment of these ends with the use of as little ether as possible should be our object.

The dividing line between the second stage of relaxation and that of surgical anæsthesia is the presence or absence of reflexes. The reflexes commonly employed as guides in anæsthesia are the conjunctival and laryngeal. So long as any voluntary movement is observable it is unnecessary to test for reflexes, and they should be used as little as possible in any case. A careful study of the respiration during anæsthesia is a very valuable guide and to the expert is almost as certain as the reflexes.

The conjunctival reflex is taken by raising the upper eyelid with the one finger and gently touching the conjunctiva of the lid or sclera with a second finger. A puckering of the lower lid, which should not have been touched, towards the nose is the effect of the conjunctival stimulation and shows that reflex sensation is present. If fresh ether is poured on the inhaler the irritation of the pharynx by its vapor produces a reflex movement of swallowing if reflexes are present, observable in the motion of the larynx.

The purpose of the anæsthetist is, therefore, to keep the patient just in the stage of surgical anæsthesia and yet as near the reflex stage as possible. Deeper anæsthesia is often required; the pupils and breathing must then be the guides, as the patient goes deeper under the anæsthetic the pupils gradually dilate and do not come to the pin's-head size, which is their general state at the beginning of the anæsthetic stage. A dilating pupil, with reflexes absent, means stop the ether; a dilating pupil, with the reflexes present, means push the ether. The pupil, however, can be dilated in the third stage to half its full size without danger, though the patient must be carefully watched. Very little ether is required to keep the patient under its influence after full anæsthesia has once been reached and the less given the better for the patient.

The use of mouth-gags, tongue-forceps, etc., are seldom needed when ether is rightly administered. By grasping the patient's jaw behind the angles, on the ascending rami, and using gentle traction anteriorly, the hyoid bone and the pharyngeal structures attached to it are drawn forward, the epiglottis is raised and the entire pharynx opened.

Any tendency to vomiting should have been avoided by prohibiting any

but a very light breakfast, but if the patient tends to vomit the ether pushed early will stop it, or, if too late, the head must be turned on the side so that the food will flow on the side of the pharynx and avoid the larynx. Neglect of this precaution, and the inspiration of food, may lead to choking and asphyxia, or later to an inspiration pneumonia. Artificial respiration or Labord's method of resuscitation (to be described later) by the rhythmical traction of the tongue, and other measures should be employed if the breathing seems to be failing.

A rapid, compressible, thready pulse denoting weakness in the circulatory system and often due to an excessive loss of blood, should be counteracted by the hypodermatic administration, to an adult, of one-fifteenth of a grain of strychina sulphas repeated once in half an hour if indicated by a pulse of 140–150 per minute.

Further "Talks" on surgical subjects will comprise the study of asepsis and antisepsis in their relation to daily practice, the preparation of instruments, sutures, the field of operation and the antiseptic treatment of the commoner surgical ailments, not attempting to deal with the more abstruse problems.

ASEPSIS IN OBSTETRICS.

BY DOWLING BENJAMIN, M.D.

Asepsis must begin not later than the date of our entrance into the practice of medicine. Indeed, it is better to begin in our junior year at college. I remember that during my last year at college, having seen most of the students coming down from the dissecting room on the fourth floor grasp or slide their hands along the hand rail of the stairway, I decided never to allow myself to touch it in going up and down the stairs.

Beginning, therefore, early in this line, I have demonstrated the feasibility of practically eliminating sepsis from one's practice, never having had a death from puerperal fever, and never having had it occur once only in my practice. (See essay Antiseptic Practice, read before State Medical Society, New Jersey, 1887, and published in the Transactions of that year; also, *Medical and Surgical Reporter*, same year.)

If a physician once allows himself to become infected with pus or other septic matter by handling the same and forgetting to properly disinfect his hands, he has probably laid the foundation of almost endless trouble, and, before he is aware of it, has sown broad and deep the seeds of future suffering. It will sometimes show in his practice for years.

Perhaps he has handled his instrument case and the appliances and surfaces contained therein, or his books, his office chairs and furniture,

reins of his driving horse, or his carriage, from some of which sources will ever and anon the germs of septic disease escape, to find lodgment in his obstetrical and surgical work. It is, therefore, of the utmost importance that he begin his asepsis early, practice it with such constant assiduity that it becomes to him a second nature; so that not only will he avoid coming in actual contact with all sources of infection, but intuitively, after having necessarily touched them, thoroughly disinfect his hands before touching anything else.

The use of unsterilized water in all communities, and especially in cities which take their water supply from streams into which sewers empty, is one of the conditions that render it extremely difficult for the physician to keep himself, patient and nurse aseptic. The water in such cities, receiving the discharges from all manner of diseases and the washings from hospitals and all kinds of sores, necessarily contains numerous pathogenic bacteria, so that the patient about to be confined, though practically aseptic, may be and often, no doubt, is actually infected by the very bath ordered by the nurse, preceding confinement. It is, therefore, almost impossible to get along without the use of antiseptics, and physicians at least should use nothing but sterilized water in their ablutions and all office work.

Fortunately, water can be sterilized by boiling for fifteen or twenty minutes, heat of 212° or over being a perfect antiseptic; so it is seldom, even in private practice, that we cannot obtain sterilized water.

Domestic animals must be avoided. They are seldom clean and never aseptic. They should not be allowed in the house; certainly not in the sick-room. If the physician, nurse or patient handle dog, cat, horse or their belongings, the hands should be immediately sterilized. Such animals afford excellent quarters for microbes, especially the Tetanus Bacilli. Do not cover your horse with your lap blanket, or your lap with the horse blanket.

When visiting cases of contagious disease confine contact with the patient and his surroundings to your fingers as much as possible; then, before touching anything else, sterilize them with an antiseptic (all rooms should contain one) after washing the hands with soap and water, not in a basin, but over one, with the water poured from a pitcher or from a spigot.

If it is necessary to apply your ear to the patient, always first spread over the place a clean or aseptic towel. If you have a suppurating wound or sore to dress, always use dressing forceps, which are to be immediately sterilized. It is seldom necessary to touch sores with your fingers.

These considerations should apply in everyday general practice. Thus you are always ready and, under all circumstances the safest person in the lying-in room, although in the general practice of medicine.

HOW TO INTRODUCE A TUBE INTO THE STOMACH WITH THE LEAST POSSIBLE EMBARRASSMENT OF THE PATIENT.

BY BOARDMAN REED, M.D.

When you first introduce a tube into the stomach of a new patient it will often be for diagnostic purposes an hour after the usual test breakfast of bread and water. Otherwise let him come with an empty stomach for the first time, if possible, unless there should be an urgent need for washing out the viscus without delay. Do not say too much about the procedure beforehand, but let what you do say be entirely of a reassuring character. Speak of it incidentally as a very trifling matter, which ought to cause no more inconvenience than examining the nose and throat instrumentally. Mention, if you like, that many persons use the tube themselves every morning before breakfast as regularly as their tooth-brush; but do not advise any of your patients to use lavage for long periods without your frequent oversight. It does not suit all, and is not indispensable in even all catarrhal cases.

Select for first use a small tube (not over a number 25 or 27, French), highly polished, of medium flexibility and with a conical end, having a small opening directly in the end, and at least one fenestrum on the side, about three-quarters of an inch above. A second fenestrum, half an inch higher, makes the tube less apt to block in performing lavage. You will need larger tubes when doing this in bad cases of gastric catarrh or of food stagnation, especially if you wash out at any time other than before breakfast.

As a lubricant for the tube, warm water answers well, as a rule, though olive oil, butter and glycerine are often used. The last named has the advantage of being sweet and odorless.

Having secured the proper mental state, which should be as nearly as possible one of composure, devoid of excitement and apprehension, slip around the patient an apron, preferably of thin rubber cloth and large enough to cover the body down to the knees. This should pass outside the arms (so as to prevent the hands involuntarily grabbing the tube at a critical moment) and be buttoned or tied behind the back. Then place him in the sitting position, in a good light, and sit down yourself in a lower chair facing him. Tell him now that all he has to do is to open his mouth widely and breathe regularly with unusual deepness; that the only reason, as a rule, why some persons are uncomfortable when they first take a tube is that their respiration is embarrassed as a result of a reflex irritation from the nerves of the throat, and that this can usually be avoided by breathing very deeply. Show him what you mean by taking a few strong inspirations yourself and, if doubtful of him, ask him to breathe as desired for a few moments before you introduce the tube.

Then, taking hold of the tube as you would a pen, about six inches from the stomach end, pass it carefully back over the center of the tongue into the pharynx. Use your sight, and not a finger of the other hand, to guide the end of the tube down through the middle of the pharynx into the œsophagus. The moment it reaches the pharynx the patient must be told to swallow, which will facilitate its entrance into the œsophagus, down which it will glide easily with the gentlest pushing on your part, provided the patient continues breathing at least as deeply as normal and makes swallowing motions frequently. Even without the swallowing the tube can be easily and safely pushed on into the stomach if full inspirations are kept up.

You will usually have difficulty in getting a tube into the stomach of hard drinkers, and will often fail altogether with them. Very nervous and even hysterical women are less troublesome and will occasionally surprise you by the ease with which they swallow the little instrument for the first time, but sometimes one with extraordinarily heightened reflexes about the pharynx and very weak will power is unable to resist the impulse to seize and pull out the tube the moment it enters the œsophagus, or even when it has already passed into the stomach and self-control for a second or two longer would enable a sample of the stomach contents to be obtained for analysis. In such cases it is indispensable that the hands be either well pinioned by a snug-fitting apron or held in the hands of an attendant, under the guise of sympathetic support.

It is unusual for patients to complain of any serious nausea as the result of the introduction of a tube, and I should say that not more than one in twenty is excited to vomiting by it. The annoyance usually is from embarrassed respiration, the patient feeling as though he could not breathe. There is apparently in these cases a real obstruction of the air passages, a result according to Vierordt of a spasm of the glottis. This can be overcome by voluntarily bringing into action the auxiliary respiratory muscles and making rhythmical forced inspirations. This relieves in a double way, (1) by diverting the attention of the patient from the passage of the tube and thus lessening the tendency to reflex spasmodic action, and (2) by powerfully expanding the lungs so as to obtain the entrance of air in spite of the contraction.

Most stomach tubes have rings marked around them to indicate how far they should be introduced. The idea is to push the tube on until the ring comes to the teeth. This is a poor dependence. The distance from the teeth to the bottom of the stomach varies in even healthy persons according to their height and peculiarities of build, and in conditions of displacement or dilatation of the organ, which are exceedingly common, especially in women, the tube may have to enter from one to possibly seven or eight inches beyond the mark. There are two ways of determining how far to introduce the instrument. The easier is to try it first at an inch or so above the mark, and if no fluid can be made to flow, gradually push it

further, even if it is required to pass it to a point six or eight inches beyond the mark. When liquid will flow in, it must return if the tube has been passed to just the right point and not beyond it. To pass it too far is as bad as not far enough, since the end may then curl up and the opening emerge above the level of the contents.

The surer way is to determine first by one of the numerous modern methods, to be described in a subsequent "Talk," where the bottom of the stomach is, and then having measured the tube over the outside of the body, the distance necessary to insert it, is readily seen.

Some authors speak of the possibility of the entire tube's being swallowed so as not to be recoverable without an operation. This could never happen with inexperienced patients, who are always trying rather to force the instrument out; and only the grossest carelessness could make it possible with an experienced one. The long tubes now mostly in use reaching two to four feet outside the mouth, could not pass entirely into the stomach unless intentionally swallowed. With those having a bulb on them for the purpose of forcing air through when clogged, or a soft rubber funnel at the outer end, the accident would, of course, be out of the question.

As to the contra-indications for the tube, they will be few when you have become expert so as to be able to introduce it without letting the patient become unduly excited. But it will be wisest never to resort to its use soon after a hemorrhage from any internal organ, in cases of aneurism, in advanced heart or lung disease, or in conditions of great physical debility from any cause.

How to wash out stomachs as well as the diagnostic significance of the wash water and its contents, the various kinds of test meals, and a description of the simpler and more important tests of the gastric contents will be among the subjects of future "Talks."

SELECTIONS AND TRANSLATIONS.

THE THERAPEUTIC INDICATIONS OF A VEGETABLE DIET.

Translated especially for the INTERNATIONAL MEDICAL MAGAZINE.

ACCORDING to Strasser (*Wien. Med. Press., Gaz. Med. de Liége*) the scientific advantages of a vegetable diet are chiefly the absence of the production of toxins in the alimentary canal. It is therefore of value when auto-intoxication is suspected and should be combined with a milk diet. It is however impossible to determine exactly beforehand what the

effect of such a diet will be on a person who is not in health. This is one of its disadvantages as a remedial measure. Furthermore, the amount absorbed and utilized is much less than in animal foods, the waste equalling nearly one-half. As a consequence the patient must eat nearly twice as much to obtain the same amount of nourishment. In the preparations of cereals from which the cellulose has been removed by commercial processes the absorption is greatly increased and only about three per cent. of waste is found of the nutritive elements.

The vegetarian diet avoids the decompositions which are caused principally by the albuminoids, while the fermentations are due to the carbohydrates and result in the production of gases. Absorption and assimilation are in addition easier with vegetables than with animal food.

The class of individuals in whom this diet produces the best results are those in whom hypernutrition is present. The lazy good-livers, who eat much and drink more, who take little physical exercise, are obese, vaguely gouty, often arterio-sclerotic, plethoric, congested and, at the same time, nervous or neurasthenic. They seldom have a true albuminuria or glycosuria and often are constipated.

To these patients the vegetarian diet acts as a cleanser of the tissues. Under its influence their plethora disappears, constipation ceases, the urates become more abundant in the urine and its acidity becomes neutralized or it may become alkaline. To produce its full results it should be persisted in for two or three months. This, however, is difficult, but relapses from it produce recurrences of all the old bad symptoms, while continued relapses finally end in a condition which their peculiar diathesis has fixed for them.

Frequently patients are found weakened after one or two weeks of dieting. The indications are to give a little meat once a day and neutralize its effect by prescribing two to five pounds of grapes per day.

The second group of patients who are favorably acted upon by this form of diet are the arterio-sclerotics. It is not a cure for the disease. It prevents auto-intoxication in patients whose kidneys are diseased and reduces the abdominal plethora. It is well to combine it with a milk diet.

This diet is indicated in certain forms of intestinal disturbance. It aggravates the condition in acute catarrhs of the stomach and intestines and in chronic cases accompanied by dilatation with abundant secretions. It is very successfully employed in cases of nervous and atonic dyspepsia or that due to intestinal anæsthesia with obstinate constipation.

The method of dieting should be adapted to the individual case. When the patient is feeble it should be begun gradually. If the patient is strong yet with nervous or a neurasthenic dyspepsia, the diet should be insisted on immediately and maintained until its full results are obtained. In all cases, but especially in the nervous dyspeptics and those troubled by habitual constipation, a grape cure, should, perhaps, follow the vegetable diet. It is especially useful in dyspepsias accompanying congestion of the liver.

Strasser has found this treatment particularly effective in chlorosis,

where frequently the patient has a distaste for meat foods. Here the green vegetables, the herbaceous roots and the fruits should be combined with a milk diet. The cereals and potatoes are less useful. The result produced is ascribed to the complete change of diet rather than to any specific effect on the system.

REVIEW OF MEDICAL AND SURGICAL PROGRESS

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

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Therapeutic Fasting in Typhoid Fever. Adolph Koenig, Pittsburg, Pa. (*Pennsylvania Med. Jour.*, July), summarizes the points in favor of fasting in typhoid fever as follows: 1. To reduce to a minimum the gas and toxin formations of the putrefactive bacteria. 2. To increase the resisting power of the patient for the bacillus typhosus. 3. To favor the ease and comfort of the patient. 4. To counteract the tendency toward diarrhœa. 5. To prevent as far as possible the third or stage of mixed infection of the disease.

Danger of Error in Diagnosis Between Chronic Syphilitic Fever and Tuberculosis. E. D. Janeway (*American Medical Journal of the Medical Sciences*, September, 1898) reports six cases which came under his notice that had been diagnosed by physicians of repute as tuberculosis, but which all responded to antisyphilitic treatment. He says these errors in diagnosis are very often the result of physicians not being aware that fever may attend the late manifestations of syphilis, more particularly visceral syphilis. The neurologist is sufficiently alive, in many instances, to the importance of always considering the possibility of syphilis being an etiological factor in the obscure diseases of the nervous system and he very generally gives the patient the benefit of a doubt, when uncertain, and attempts a diagnosis by the use of antisyphilitic measures. The class of

cases to which he draws attention, do not go to a syphilologist, but to the general or consulting physician and it is from this fact that attention is directed to the necessity of considering syphilis as a possible cause of those obscure phenomena which are usually only considered to import tuberculosis, malaria, or sepsis; mistakes being very often made, the cause being ignorance of the fact that syphilis, in what is termed its tertiary period, may occasion a fever of long duration, malaise, emaciation and perhaps perspiration.

Typhoid Fever in the Porto Rican Campaign. N. Senn (*Journal of the American Association*, September 10, 1898) states that typhoid fever was mild in character among the soldiers in the Porto Rico campaign, as shown by the investigation made of all the fever cases in the hospitals, 90% were genuine cases and the infection was traced to the United States. The first symptoms appeared in eight before leaving the United States, 86 on transport, 68 within ten days after landing, total, 162. The places of inspection were as follows: Chickamauga, 90; Tampa, 48; Camp Alger, 23; Newport News, 1; total, 162. In tabulating the symptoms they appear as follows: Tongue—dry, coated red at tip and margin, 10; coated, white fur, 21; coated, pale, flabby, 17; coated, red tip and margin, 56; dry, brown and fissured, 20; moist, glazed, red, 13; lordes, lips and teeth, 12. Abdomen—tympanitis, 29; tenderness and gurgling right iliac fossa, 71; rose spots, 37; spleen enlarged, 14; spleen markedly enlarged, 20; epistaxis during prodromal stage, 28; diarrhœa, 87; intestinal hemorrhage, 3; bronchitis, 20; delirium, 1. The absence of delirium in all cases but one is remarkable. Nearly 200 of the graver cases were transferred from Ponce to New York, August 15th, on the hospital-ship *Relief*. Of this number 14 died en route, and 12 were buried at sea. In one case gangrene of the penis, which assumed a progressive form, was the direct cause of death. A metastatic abscess of the submaxillary gland occurred in one case, which is a rare complication in typhoid fever.

Diphtheria as Viewed by the General Practitioner During the Last Year. Alexander McAlister, of Camden, N. J., says (*University Medical Magazine*) that until recently diphtheria ranked as the gravest of the anginas, and the most dreaded of the acute febrile affections, but recent advances in diagnosis and treatment have left scarlet fever at the head of the anginas, and typhoid at the head of the acute fevers, in point of morbid possibilities. This wholesome change he thinks is due exclusively to an ever-broadening and deepening conception of both diphtheria and its biologic antidote, antitoxin. One of the most encouraging experiences of many a physician, who has adopted the serum treatment of diphtheria, is that he now only exceptionally meets more than the initial case or cases in a family. In view of these facts it would seem that the attitude of the

general practitioner towards the serum treatment is a more seasonable subject for discussion than the merits of antitoxin. The initiative in the investigation of this most interesting subject was doubtless taken by Dr. Geo. L. Cole, of Los Angeles, and in response to a circular letter addressed to about 300 physicians he received replies from 156. Of this number only four expressed themselves as antagonistic to serum treatment, but none of these had personally tried the remedy nor had an occasion to do so. In writing of the improvements which made it possible to inject large doses in such small quantities of serum, he thinks they are without parallel elsewhere in the pharmaceutical sciences, and that the ideal antitoxin from every point of view is that product permitting the administration of 1,000 units of antitoxin in from two to four cubic centimeters. It is conceded that the more concentrated the product is the more readily deterioration takes place, so that the higher strengths are relatively unreliable, after one to four months. This in itself is a considerable disadvantage to the clinician. To him there are a score of elements that center in a particular antitoxic serum of vastly more importance than higher degrees of concentration. Chief among these he names a high unit value, a definite system of standardizing, convenient bottles and uniform potency.

How to Rub in Salicylic Acid in Rheumatism. Husson (*Rev. de Therap.*, July 15, 1898) employs the following formula when he wishes to introduce salicylic acid through the skin of a patient who is suffering from rheumatism :

℞.	Ac. salicylic. pulv.,	ʒj.
	Ol. terebinth.,	ʒj.
	Lanolin,	ʒviij.

The skin is first to be cleansed with soap and water, but is not to be shaved, as the pulling upon the little hairs favors the introduction of the remedy through the skin. Friction should last for at least five minutes. After the friction is over the limb should be wrapped in cotton in order to preserve an even temperature. Treatment is to be repeated daily. One inconvenience of this method of administering salicylic acid is the desquamation of the epidermis, on account of the solvent action of the acid upon the cornified layer. However, this desquamation does not occur until five or six days have passed, and by that time the therapeutic effect of the drug has usually been fully realized. At any rate, desquamation is not painful, and treatment should not be suspended for this cause. This method of administering salicylic acid is rapidly gaining favor on account of the annoying gastric complications which so often follow the ingestion of the drug or its compounds.—*Medical News.*

Filipowicz's Palmo-plantar Sign in Typhoid Fever (Quentin in *Arch. génér. de méd.*, May, 1898). Best seen on the hand ; the palmar surface appears dry, furrowed and lemon-colored. Opposite the heads of the

metacarpal bones the color deepens into brown. The epidermis is thickest where the color is most intense. The sign appears with the rose-colored spots and, like them, may be attributed to nutritive disturbances.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

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Introduction to a Discussion on the Prognosis of Cardiac Diseases in its Bearing upon Life Insurance. Sir William T. Gairdner (*British Medical Journal*, September 17, 1898) refers to several interesting cases of disappearance of murmurs. A physician with a mitral regurgitant murmur and who had had several attacks much resembling angina pectoris led a very active life and died at the age of seventy years of some affection not cardiac. The murmur disappeared in after-life. A gentleman had had a loud presystolic murmur since boyhood, dating from an attack of chorea-like movements. He led a very active and athletic life while under observation for thirty-six years and is still alive. The murmur has almost, if not entirely, disappeared. Another case was that of a gentleman who consulted Gairdner for some cardiac disturbance. He survived ten years, and at the autopsy a tumor was found projecting from the wall of the right auricle, not implicating the tricuspid orifice but obstructing it to a considerable degree. The heart was somewhat dilated. Considering the various forms of cardiac disturbance, especially in regard to their prognosis in relation to life insurance, Dr. Gairdner draws the following conclusions: A roughening of the first sound is very often pericardial in origin and is not of great significance. An acute attack of pericarditis may end in complete resolution. Senile degeneration of the heart and vessels is always serious. Functional disturbances with arhythmia have an uncertain prognosis, but may be favorable. Gairdner cites such a case in which a man with a very irregular heart from childhood lived a long and active life. He considers bradycardia more serious than tachycardia. Dr. Symes Thompson, in the discussion, debates this point and cites a case of a man with a pulse seldom above thirty-two beats a minute who lived an active life for many years. Gairdner considers the murmur of chorea as almost invariably organic, but says these cases may apparently completely recover and lose the murmur. The significance of variations in size of the heart without signs of disease

s unknown. He states that he cannot make a certain diagnosis between true and pseudo-angina and doubts when such a distinction is possible. A history of sudden death in other members of the patient's family is a valuable diagnostic point.

A Rare Case of Dislocation of the Heart. P. Usson (*Medicinskogi Obosrengi*, April, 1898) reports the case of a woman who was suffering from an abscess of the left lung following an attack of croupous pneumonia. He found the following condition: A localized area of dulness under the left scapula extending forward to the left axillary line, posteriorly almost to the vertebra, inferiorly to the usual lower limit of the lung. There was pulsation over this entire area. The apex beat was palpable in the left posterior axillary line under the ninth rib. Both heart sounds were clearly heard over the apex beats. In the normal position for the heart there was resonance and no heart sounds were audible. The displacement of the organ was verified by the use of the Röntgen rays.

Weakening of the First Sound of the Heart in Typhoid Fever. Rosenthal, of Copenhagen (*Klinisch-therapeutische Wochenschrift*, September 18, 1898), studied fifty-seven cases of typhoid fever with special reference to this symptom. Isolated cases—seven in all—have been reported by Galliard, Petit and Picot. In not less than seven (all men) the first sound of the heart was inaudible at the apex and at the base. In five other cases (three men, one woman and one child) it was almost inaudible at the base and clearly heard at the apex. The phenomenon lasted a varying length of time and showed the greatest irregularity in its appearance, coming and going very suddenly. Other disease of the heart was always excluded. The condition always occurred in severe cases that often presented complications, but bore absolutely no relation in its severity to the height of the temperature, and usually occurred during very moderate pyrexia. In Rosenthal's cases this disappearance of the first sound did not appear to have any bearing on prognosis. The percentage of death of the positive cases was about that of the negative ones. The pulse during the attack was usually small, weak and rapid and often dicrotic. Diuresis often accompanied the phenomenon. The pathogenesis of the condition is probably some functional disturbance of the cardiac nerves. The fatal cases always showed some acute myocarditis at autopsy, but the variability of the occurrence of the symptoms suggests that the cause is probably not an inflammation of the myocardium. Physically the absence of the first sound is best explained by weakening of the contraction of the ventricles during systole.

Pulsus Paradoxus upon one Side. Dr. Reineboth, of Halle (*Deutsche Archiv. für Klinische Medicini*, Band 60, Heft. 2, v. 3), discusses this subject. By "pulsus paradoxus" is meant that the pulse

becomes smaller during inspiration. It occurs in sound persons, but especially in cases of heart weakness particularly in moribund cases of pneumonia. By "pulsus differens" a further distinction is made that the pulse of one side is smaller than that of the other. This may be caused by the narrowing of the caliber of the whole artery or by a local narrowing. Now, when the "pulsus paradoxus" is joined with the "p. differens" in the same case it can be seen that on the side of the pulse of smaller volume the effect of inspiration may be such as to make the pulse of this side unappreciable while that of the other can be plainly felt. Then we have unequal pulse rates on the two sides. It is also probable that all cases of outspoken "pulsus differens" which are dying of heart weakness, at a certain time come to present the phenomenon of "pulsus paradoxus" upon one side. It can be shown by artificial narrowing of the brachial artery that inspiration has a depressing effect upon the pulse of small volume thus produced, and so a "pulsus paradoxus" of one side can be experimentally produced in any one. Reineboth gives four cases in which the subclavian artery of one side was narrowed and the patient suffered from heart weakness producing "pulsus paradoxus" in one radial. In every case the number of pulse beats per minute upon the side of the smaller pulse were fewer than the number of the stronger side. This is easily explained upon considering that a combination of "pulsus paradoxus" and "pulsus differens," when the heart is weak, would be likely to make the pulse beats of the weaker side that occur in inspiration unappreciable and so an apparent difference in number of beats per minute in the two radials. Difference in the number of beats of the two sides can also be produced by some adhesion to the subclavian which is drawn tighter on inspiration and so cuts off some beats from perception by the finger at the wrist.

DISEASES OF THE DIGESTIVE SYSTEM.

UNDER THE CHARGE OF

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Esophagotomy. B. L. Eastman (*Kansas City Medical Index*, September, 1898) reports the removal of a silver dollar from the œsophagus of a man nineteen years old. The coin was located by the fluoroscope about 1½ inches above the suprasternal notch, and after the tissues of the neck were separated by blunt dissection, it was removed by tearing the œsopha-

gus near the caroid sheath; the wound was then packed. The wound in the œsophagus had healed soundly at the end of ten days, and the patient left the hospital at the end of three weeks.

Relaxed Abdomen and its Evil Consequences; Its Cure; Its Prevention. H. Illoway (*The Journal of American Obstetrics and Diseases of Women and Children*, September, 1898), in a lengthy article, says that under certain conditions the abdominal walls become relaxed to a greater or lesser extent, and according to the degree of relaxation, of impairment of their force, impairment of the physiological functioning of one or more of the various organs of the abdominal cavity, may occur, causing constipation, atony of the stomach, enteroptosis, instability of the kidney, hepatoptosis, dragging forward and downward of the bladder. As to the cure of this condition he thinks that much may be accomplished, in the lighter forms, by the use of mechanical methods of treatment: massage, electricity and hydrotherapy, and in the wrinkled belly resulting from pregnancy the fattening process in conjunction with the other measures named is of much service. In the severer forms, but little can be done for their relief except by way of palliation with appropriate bandages. He classes the measures to be employed for the prevention of this condition into two groups: those to be employed during pregnancy, such as dietary measures, inunctions with oil or vaseline, and abdominal support by bandage; and those to be employed after parturition; the well-known binder.

A Note on Auscultatory Friction as an Adjunct to Auscultatory Percussion in Abdominal Exploration. Wm. Ewart and A. C. Pearson (*Lancet*, August 27, 1898) call at tention to the value of surface friction used in association with auscultation, for the purpose of delimiting the outlines of organs, particularly in tracing the boundary between such similar viscera as the stomach and distended colon. With a good stethoscope held over a hollow organ such as the above-mentioned, friction is made by lightly rubbing a finger tip over the surface in various directions. The sound is conveyed loudly to the ear so long as the rubbing is over the viscus upon which the stethoscope is placed.

Alkalies in Dyspepsia. The choice of an alkali in an acid dyspepsia is not an indifferent matter. Dubard has shown in the *Journal of the American Medical Association* that the acidity and pyrosis connected with the presence of organic acids in the stomach are rendered more intense by sodium bicarbonate, while they are favorably affected by the magneso-calcareous powders. In true "hyperchlorhydrie," the preparations of lime and magnesia aggravate these conditions, while sodium bicarbonate is beneficial.

Concerning Tetany with Dilatation of the Stomach. R. Sievers (*Berliner klinische Wochenschrift*, No. 31, 1898) reports two cases of tetany resulting from dilatation of the stomach following the cicatricial contraction of ulcers in the pylorus. One was dying and the other seriously prostrated upon entering the hospital and both died. Both had most of the characteristic tetanic symptoms.

Primary Cancer of the Esophagus; Perforation of the Right Bronchus; Extension to the Right Lung. J. P. Arnold (*University Medical Magazine*, September, 1898) reports the above condition in a man sixty-two years of age, who, on admission to the hospital, complained of rapid loss of flesh for four months, constant vomiting, pain behind the middle of the sternum, and in the epigastrium. During these four months the patient had been able to swallow scarcely any solid food, living principally on bread and milk. The man's family history was negative, except that one brother died of cancer of the stomach. A point of interest in the patient's own history was that he was a sailor and was accustomed to the use of large quantities of strong liquor, especially rum. About a year after his first admission to the hospital he began to cough and complain of pain over the right side of the chest. At this time there was also marked dulness over the lower lobe of the right lung, expectoration became profuse and very offensive, the patient dying of exhaustion three months after. Autopsy showed that the tissues of the mediastinum were adherent in one mass and tightly attached to the right lung. The lower lobe of this was so tightly adherent to both thoracic and diaphragmatic pleuræ that it could not be removed without tearing its substance. The whole lobe was of a greenish color and was consolidated. The middle lobe showed the same condition. The mediastinal glands were much enlarged. The stomach and intestines empty. A growth was found completely encircling the œsophagus, a greater part of the surface being ulcerated. The obstruction was hard, whitish and presented papillary elevations. The œsophageal wall was perforated by the ulcerative process, and the opening communicated with the right bronchus. The right pneumogastric nerve was imbedded in the tumor near the side of the perforation, probably accounting for the slow pulse observed for two months, although the temperature was between 100° and 102° F., the pulse rate was from 50 to 60. Histological examination of the growth showed it to be a squamous epithelioma.

Infectious Hæmatemesis, according to Dufour (*Gaz. hebd. méd. et chir.*, 632, 1898) occurs in purulent infections, surgical septicæmias and in certain obscure forms of blood poisoning. The gastric lesion is either a simple ecchymosis of the gastric mucous membrane or a perforating ulcer or Dieulafoy's *exulcératio simplex*, in which latter form the hemorrhage is most severe.

Effect of Certain Drugs on the Stomach. (*J. des connaissances médicales*, Aug. 11, 1898.) Fremont keeps a number of dogs whose stomachs have been separated from the œsophagus and the intestine. The organ, thus isolated, lives, feels, reacts and secretes. The gastric juice is readily obtained by means of an abdominal fistula. The author has thus been able to test the influence of various drugs on gastric digestion. After determining the total acidity and total percentage of chlorine in the gastric juice, he empties the stomach, introduces the drug he wishes to experiment with, and after four hours again evacuates the stomach and analyzes the contents. Taking the total acidity and chlorine percentage of normal gastric juice as 100, he obtains the following figures:

	Dose.	Total acidity.	Total Cl.
1. White wine,	36 cc.	489	267
2. Gentian,	3 grm. infusion.	352	227
3. Condurango,	2 grm.	240	144
4. Centureana (holy thistle),	1.44 grm.	215	223
5. Hops,	1.73 grm.	191	192
6. Simarouba,	1.44 grm.	184	190
7. Menyanthes,	2.50 grm.	161	175
8. Columba,	1.08 grm.	140	136
9. Quassia amara,	1.08 grm.	117	117
10. Strychnine,	2 to 3 milligr. in solution.	143	119
11. Pilocarpine,	2 milligr.	107	112

This table shows that many substances really have the effect of stimulating gastric secretion, white wine holding the first rank. Gentian and condurango increase the amount of HCl particularly. The stimulation is temporary; on the second day the effect of the same drugs on gastric secretion was found to be much less. In the course of his experiments Fremont observed that simarouba provoked hemorrhagic gastritis in twelve of the animals.

Diet in Hyperacidity. This forms the subject of an elaborate paper by Strauss and Aldor (*Zeitschr. für diätet. und physikal. Ther.*, Vol. I., No. 2). In the dietetic treatment of hyperacidity of the stomach the general needs of the debilitated system demand attention as much as the local condition of the organ itself, and, as in a hyperacid stomach starchy foods can scarcely be digested, the problem is to construct a menu offering sufficient variety, in which the carbo-hydrates indispensable to heat-production shall be replaced, so far as possible, by some other food. The authors believe they have found the solution in a liberal exhibition of fat, which, without exciting HCl secretion, introduces into the system a large number of calories of non-nitrogenous substances. Experiments by Kaumier having called their attention to this important property of fat, Strauss made a series of experiments to determine the effect of fat on the secretion

and movements of the stomach. Further corroboration was found in the experiments of Ewald, Boas, V. Noorden and many others. The retarding effect of an abundant fat diet on peristalsis and absorption is not great enough to be a contra-indication, as it sinks into insignificance beside the immense advantage of the increased amount of fuel supplied to the system, especially in reduced and diabetic subjects. The authors have put their theories to the test of actual experiment on a number of patients, a full account of which appears in their paper. The daily exhibition of fat in these experiments varied from 122.5 to 159.9 g., equivalent to 1,487 calories, or a little more than half the total number of calories. The daily diet consisted of 4 eggs, 1 liter milk, 300 cc. bouillon, 200 g. chopped meat, 3 rolls, 150 g. butter, 1 liter weak coffee without cream or sugar, and 15 g. salt.

NEUROLOGY.

UNDER THE CHARGE OF

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Radialislahmung nach epileptischen Anfällen (Paralysis of the Musculospiral Nerve following Epileptic Attacks). (*Neurologischer Centralblatt*, No. 15, 1898.) By Adler. Hemiplegia, paraplegia or monoplegia is not uncommon after an epileptic attack. Occasionally paralysis of the face or tongue occurs. The explanation for these phenomena, according to some writers, lies in the exhaustion of the brain by the epileptic discharge. Adler has twice noticed a musculospiral paralysis of peripheral origin following an epileptic seizure. Gowers has seen three instances of musculospiral paralysis following violent contraction of the triceps muscle. Oppenheim acknowledges that such an etiology is possible. Adler believes that in his cases a sudden and violent muscular contraction during an epileptic convulsion caused compression of the musculospiral nerve between the muscle and the bone.

On the Validity of the Neuron Doctrine. (*The American Journal of Insanity*, No. 1, Vol. IV.) By Lewellys F. Barker. The doctrine of the neuron seems to be in danger of a premature death and Barker writes in support of the theory. He shows that Waldeyer does not deserve all the credit which has been given him, but is worthy of much praise for his masterly monograph, published seven years ago. He quotes Waldeyer's article to show the views held by the latter, and to prove that Waldeyer did not exclude the possibility of the existence of a nerve network. His was the first to clearly demonstrate the cellular nature of the nervous system. The method of Golgi, employed by many investigators, and the study of secondary degeneration have done much to establish the neuron

theory. This doctrine is based upon (1) the *a priori* probability that the nervous system, like other parts of the body, is a cellular system; (2) the proof that, in the embryo, the nerve cells are independent units; (3) the evidence afforded by pathological processes confined to certain systems; (4) the individuality of cells and their processes as revealed by certain stains. It seems to be established that even in mammals dendrites may occasionally anastomose. The researches of Held and Apáthy have placed the doctrine of the neuron in more danger than those of other investigators, but Barker points out that the methods of Held enable one to distinguish between the protoplasm of two neurons at their line of union. He regards as premature any extensive modification of the neuron doctrine based on Apáthy's findings, and indeed, he even says that, were Apáthy's observations and theories entirely in accord with the facts, the neuron doctrine, as conceived by Waldeyer, would not have to be seriously modified. There is not so much—as many seem to think—that is novel in Apáthy's statements. We may be judiciously skeptical as regards the deductions and hypotheses made by Apáthy; that the human nervous system, however, is made up of neurons would seem to be too firmly established ever to be utterly overthrown.

Ein Fall von spinaler Monoplegie des rechten Beines (A Case of Spinal Monoplegia of the Right Leg). (*Neurologisches Centralblatt*, No. 15, 1898.) By Julius Weil. A workman, 31 years old, in January, 1897, fell into a ditch filled with water. He worked after the accident and only occasionally suffered slight pain in the calves of both legs. In the beginning of February, 1897, while carrying a heavy load upstairs, he experienced severe pain in the right knee and ankle. He observed at the same time that his right leg had become very weak. A few days later the pain vanished and did not return, but the paralysis persisted. No disturbance of micturition existed. The patellar and Achilles tendon reflexes were absent. The important features in the case were: 1. The sudden development of flaccid paralysis of the right leg. 2. The rapid disappearance of pain. 3. The absence of disturbance of sensation, except when the faradic current was employed, and of disturbance of the vesical, rectal and sexual functions. 4. The persistence of the symptoms during one and a-half years. The progressive atrophy was attributed to the persistent paralysis. As the muscles of the limb could not be irritated by the faradic current, and the clonic contractions did not occur, the absence of pain in the employment of this current is not difficult to explain. The pain from the faradic current is due to the muscular contractions. The muscles paralyzed were those supplied by nerves from the lumbar and sacral plexuses, arising from the third lumbar to the third sacral roots. Reaction of degeneration was present in the distribution of these nerves. The absence of fever made the diagnosis of acute anterior poliomyelitis doubtful. No indication of tumor could be

found. A neuritis which began in an apoplectiform manner, involved two plexuses, and did not cause pain, paræsthesia or trophic disturbances, must be peculiar. The author believed a hemorrhage occurred in the anterior horn of the right side of the cord, and extended from the third lumbar to the third sacral roots.

The Occurrence of Nerves on Intracranial Blood Vessels. (*British Medical Journal*, Sept. 17, 1898, p. 781.) By G. Lovell Gulland. In a short abstract of a paper read at the last meeting of the British Medical Association, Gulland is said to have finally been successful in finding nerves on the vessels of the brain in man and the dog, when Cox's method was employed. The nerves presented the usual appearance of perivascular nerve plexuses. Stewart called attention to the fact that Huber, of the University of Michigan, had also been able to stain nerve fibers in and around the blood vessels of the brain by the methylene-blue method, and had remarked that the question of the existence of vasomotor nerves in the brain ought to be reinvestigated. It is well known that Obersteiner in 1897 reported the finding of nerves on a pial vessel.

Hemorrhagic Internal Pachymeningitis. Herter (*Am. J. Med. Sc.*, Phila., v. 116, Aug., 1898) records two cases of this disease in children, the first a female of five and one-half months, the second a female of twenty-two months; in each an autopsy was obtained. Among the predisposing causes of the disease he places age, especially the early months of life, poor nourishment and cachexias. The symptoms most commonly observed when the hemorrhage is large are rigidity, convulsions and coma. If the hemorrhage is small and takes place slowly, convulsions may not occur. Other symptoms may be paralysis, contracted pupil and tremor of the side opposite the lesion. Bulging of the fontanelle at the onset of cerebral symptoms may be noticed, also febrile complications. The diagnosis should be considered when unilateral rigidity and convulsions, with deepening coma, are met with in a cachectic or rachitic child under one year of age. The pathological nature of the lesion is uncertain. The origin of the new membrane may be the dural endothelial cells or the sub-endothelial connective tissue cells, the new and connective tissue cells being very prone to the development of new blood vessels with thin walls. Hemorrhage may be very slight, punctate, or profuse. The membrane varies in thickness from a delicate thinness apt to be overlooked, to two or three lines. The theory of intoxication as an exciting cause of the intradural lesion is not considered by Herter as entirely satisfactory. The influence of slight traumatism must not be overlooked.

Two Cases of Acute Ascending Paralysis, with Autopsy. Thomas (*Am. J. Med. Sc.*, Phila., v. 116, Aug., 1898) gives the results of his observations in two cases, together with a review of those reported by others.

The first patient, an unmarried woman of thirty-six years, with a family history of phthisis and nervous disease and a personal history of infectious diseases in childhood, recent nervous shock and indigestion, died after an illness of about three weeks. On microscopical examination of the spinal cord and peripheral nerves the following conditions were found: An acute inflammatory exudation of the anterior horns of the cord with infiltration of their perivascular lymph spaces and dilatation of their vessels. Parenchymatous degeneration of the nerve cells and processes of the gray matter was marked; a similar condition slighter in degree of the nerve fibers of the white matter was observed. Anteriorly the nerve roots were extensively degenerated; posteriorly, but slightly. A condition of parenchymatous degeneration with perivascular infiltration was noted about the peripheral nerves. No micro-organisms were found. The second patient, an Italian laborer of thirty-five years, with a negative family and personal history, died after fifteen days' illness, and microscopic examination of the spinal cord showed varying degrees of parenchymatous degeneration in all the peripheral nerves examined and degeneration of the large ganglion cells of the anterior horns of the cord with diminution and destruction of their protoplasmic granules and loss of the nuclei. There were no changes in the nerve cells of other portions of the gray matter of the cord, medulla, brain, or spinal ganglia, nor in the white matter of the cord. The tissues were free from micro-organisms. Thomas considers the disease an affection primarily of the peripheral motor neuron which disease is probably the result of an intoxication brought about by the product of a micro-organism. The intoxication may be the result of either faulty metabolism or of the absorption of poison from without. The toxic agent probably acts in a selective manner. The disease differs from acute anterior poliomyelitis of children by being more generalized over the motor tract of both the cord and the medulla. The absence of atrophy and electrical changes is explained by the short duration of the disease.

MEDICAL DISEASES OF THE KIDNEYS.

UNDER THE CHARGE OF

PROF. DR. CARL VON NOORDEN,

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AND

JAMES TYSON, M. D.,

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A Peculiar Albuminous Body in the Urine and its Diagnostic Importance. H. Rosin (*Berliner klin. Woch.*) reports the case of a woman, aged thirty-six, who complained of headache and pain in the back; at a later date a bilateral paralysis of the hypoglossus developed. On examination of the urine, besides casts and renal epithelium, an

albuminous body was found which gave the reaction for albumose. It was precipitated by nitric acid in the cold, but the precipitate disappeared with heat. When the urine was heated up to 53°C. a thick precipitate was produced; this dissolved again when the urine was heated up to 72°C. Acetic acid and ferrocyanide of potassium produced a precipitate which disappeared by heating. The urine also gave the biuret reaction. The patient died of asthenia following pneumonia and a gangrenous bedsore. The autopsy revealed amyloid degeneration, hypertrophy and fatty degeneration of the kidneys, and myelogenic round-celled sarcoma in many ribs. The author believes that there was a connection between the albumosuria and the tumor of the ribs. Rosin regards albumosuria as a sign of considerable importance in the diagnosis of myelogenic sarcoma. —*Fortschritte de Med.*, July, 1898, and *London Med. Chronicle*, July, 1898.

Movable Kidney. J. A. Lichty (*Phil. Med. Jour.*, May 14, 1898) after a discussion of twelve cases which he briefly reports, comes to the following conclusions regarding the treatment of this condition: 1. Movable kidney may be easily overlooked. 2. Unless due to some disease in the organ itself, movable kidney is consequent to a peculiar fault in nutrition, and is always accompanied by some nervous symptoms. 3. The treatment of movable kidney, not due to any pathologic change within itself, must always be directed towards the correction of faulty nutrition, and a regaining of at least the normal body-weight. 4. If the symptoms do not disappear after this is accomplished, fit a supporting bandage. 5. If the symptoms disappear with a bandage, and if later it is necessary to wear this continually, give the patient a choice between the bandage and a surgical operation. 6. If the symptoms do not disappear after the normal body-weight is gained, or after a thorough trial of the bandage, operate, fixing the kidney permanently. 7. If movable kidney is due to disease in the kidney itself, remove the kidney early, if at all allowable.

Albuminuria in its Relations to Dietetic and Medicinal Treatment. Petteruti (*Giorn. internaz. delle Science med.*, 1897, fasc. 20) discusses this subject. In diarrhœa, and for some time after an attack of diarrhœa the amount of albumin is increased. An exclusive diet, if well borne, is the most suitable in chronic parenchymatous nephritis. Roast meats are the most injurious foods. Boiled meat, bouillon and soups made with flour are rather harmful than otherwise. Green vegetables, on account of the potassium they contain, increase the quantity of albumin slightly. Eggs are without effect. Hot baths increase the quantity of urine and urea, but have little or no effect on the amount of albumin. Digitalis has no effect. On the other hand, the quantity of urine is increased and the percentage of albumin is diminished slightly by diuretin and to a higher degree by potassium iodide. Tannin diminishes the

quantity of urine, and, to a slight extent, the amount of albumin. Antipyrine diminishes the urine, increases the albumin. Tannalbine (composed of tannin and albumin) acts as an antifermentative in the intestine and therefore diminishes the albumin and increases the quantity of urine.

Remarks upon the Value of Uranium Nitrates in the Control of Glycosuria. C. Hubert Bond, D.Sc., M.D. (*The Practitioner*), believes that the use of uranium salts in glycosuria is chiefly due to Dr. Samuel West, although in a book published in 1851 attention was called to the use of the drug in these cases by Dr. Julius Mickle and Sir George Duncan Gibb. Like all other drugs recommended for this disease, it does not control every case; he has gathered about thirty, and in some of these the sugar was lessened where codeine had failed. His conclusions are: I. It diminishes the thirst. II. It reduces the amount of urine passed. III. It reduces the amount of sugar. Of the eight cases reported by himself in one it failed entirely; in two it relieved of thirst and reduced the amount of sugar; while in others the results were perfect. As to the case where it failed entirely, he claims it was due to an idiosyncratic dyspepsia produced by it. The mode of administration was to start with three-grain doses, twice daily, and increase slowly. In one case it was raised to thirty grains three times a day. It should always be given with food and never with less than an ounce of water. A strictly anti-diabetic diet was always maintained. The author agrees with Dr. West that the uranium does not enter the circulation, as he has had the urine tested in the case where ninety grains daily were administered and it failed to show the least trace. None of his cases lost weight under treatment.

In a Monograph on Renal Tuberculosis (*Oeuvre médico-chirurgicale*, No. 9, Glasson, Paris, 1898) Tuffier has collected the most recent data and endeavored to present a comprehensive view of the entire subject. The various pathological appearances which are observed in the kidneys and other organs involved in the tubercular process are described and illustrated with drawings. While devoting due attention to the etiology, the author occupies himself principally with the diagnosis, symptomatology and course of the various clinical forms and dwells at length on the question of treatment. The indications for operative interference are reviewed and the comparative merits of nephrotomy and nephrectomy, with their operative technique, discussed.

Diabetic Coma; Recovery by Administering Oxygen Gas. Dr. Leonard W. Buckle (*Lancet*, September 24, 1898), in describing "Some Experiences of an Australian Country Practitioner," reports the case of an elderly woman seen for the first time one evening in a comatose state. Fortunately, some urine had been left in the chamber and this contained a large quantity of sugar. There being no improvement after some few

hours Buckle decided to try oxygen gas. Her neighbor was the headmaster of the Government school, who was studying chemistry. From him he got a flask and some glass tubing and rigged up an arrangement by which he generated O_2 from chlorate of potash and black oxide of manganese, led it through a wash-bottle and brought it to the patient's face by india-rubber tubing. After a while consciousness began to return. Recovery for the time was complete, the patient dying some eight months later from other diabetic complications.

Interstitial Nephritis with Normal Urine. Felix A. Laurel (*New Orleans Med. and Surg. Jour.*, October, 1898) reports a fatal case of chloroform narcosis in an alcoholic, aged thirty-one. The autopsy revealed slight traces of interstitial nephritis along with atheromatous aortic and mitral valves and congenital perforation of same. The interesting point is that a thorough examination had been made of the urine and also of the heart with the result that these organs were declared normal.

The Treatment of Chronic Diseases of the Kidneys. In a paper read before the late meeting of the British Medical Association Mr. Tirard says that in the treatment of chronic diseases of the kidney it is necessary to distinguish the various forms. In persons showing a moderately large percentage of albumin, repeated attacks of acute nephritis are best avoided by means of warm clothing and protection from sudden changes of temperature. Psychic excitement and excesses must not be allowed. When there is dislike for food and dyspepsia, small quantities of alcohol may be permitted, otherwise the diet should consist strictly of milk, poultry and fish. The best diuretic is water. Hæmaturia is best treated by rest as there is danger of affecting the digestion with astringents. For dropsy, hot-air baths, damp packs and pilocarpine are to be considered, the latter only to initiate the treatment and never in cases with weak heart. The nitrites are of value to lower the blood pressure in chronic nephritis while hyoscine and sulfonal are preferable to opium as sleep-producers. In uremic attacks nitrite of amyl is useful and to be preferred to chloroform. In the uremia following acute nephritis, diuretics and cathartics are of greater value than in the same state in chronic nephritis. In the discussion which followed, Dr. Ewald said he believed blood letting and repeated tapping to be valuable. Dr. Barr did not believe in pilocarpine and advocated exclusive milk diet, while Dr. Saundby was of a different opinion and preferred hot-air baths with erythrol-tetra-nitrate for the dyspnœa. Dr. Macalister recommended oxygen inhalations. He also disapproved of pilocarpine.

DERMATOLOGY.

UNDER THE CHARGE OF
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Of Hamburg, Germany,
AND
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Melanocarcinoma. L. C. Gilchrist (*Maryland Medical Journal*, September) reports two cases, primary in the skin, with the pathology and some observations on the structure of moles. The first case occurred in a negro, who had become greatly emaciated and who had a thousand nodules over the body, nodules in the liver and probably elsewhere. Notwithstanding this extensive distribution of the lesions there were no enlarged lymphatic glands. A portion of one of the nodules (metastases) was teased and injected into the external jugular vein of a dog. The dog was killed after two months, although apparently in excellent health. The autopsy showed no pigment or other abnormalities in the lungs. The cultures from sterilized portions of the nodules were negative. The second case occurred in one of the hospital physicians. He was twenty-seven years old, and had a small mole on the left cheek, which he had first noticed seven years before. It very gradually increased in size. Finally, after scratching, it began to grow rapidly. It was excised and sections of it exhibited distinct melanocarcinoma. The writer says he has excised a pigmented mole from the abdomen of a child and several from adults. The mole from the child showed nests of cells in the epidermis. Since, therefore, the cells of the tissue forming the mole are of epidermal origin, a malignant growth in a mole is undoubtedy a carcinoma and not a sarcoma.

At the last meeting of the American Dermatological Association Dr. Hyde said that, as a result of the efforts of the Association to collect statistics of cutaneous affection during the past twenty-one years, he was able to report that a total of more than 300,000 patients so afflicted had been examined and treated. Of this very large number more than 84,000 had eczema, more than 33,000 had syphilis, over 25,000 had acne, and more than 10,000 were affected by diseases of the skin produced by vegetable parasites. There were but three cases of actinomycosis of the skin, and two of sclerema neonatorum.

Eczema and Washing of the Hands. Unna (*Mons. f. pr. Derm.*, XXVI., p. 547, 1898) explains that the aggravation following the use of water in eczema of the hands is not due to the action of the water upon the eczematous surface, but to the drying up of the epidermis, with all its consequences—rhagades, if the washed eczematous hand is not protected from exposure to the air. In patients who are obliged to use their hands, Unna

suggests postponing the cleansing process until evening, instead of morning, when the protective ointment can be conveniently used.—*Jour. Cutan. and Genito-Urinary Dis.*

The Treatment of Lupus Erythematosus. Unna, of Hamburg (*Jour. Cutan. and Genito-Urin. Dis.*, October, 1898), does not admit any connection of this disease with tuberculosis. Its etiology, therefore, being unknown, treatment can only be based on either pathology or empiricism. Unna holds, however, that the pathological histology of lupus is now so far established that it affords a valuable clue to the treatment. Though the epidermis is so exceedingly dry, the cutis shows dilatations of the lymph-spaces and lymph-channels, œdema of the papillary body with development of larger lymph pools, and a peculiar moist canalization of the collagenous tissues. The whole condition, therefore, of the cutis being œdematous, softened and readily yielding, Unna advised the application of such remedies as are suited to reduce an inflamed patch into a pale, dry and uninflammatory condition of skin; and to avoid carefully every remedy which might produce hyperæmia and œdema, even if otherwise apparently indicated. As to the internal treatment, he considers (1) those which have a favorable influence upon the vasomotor paresis of the face, as the alkalies, carbonate of ammonia, ichthyol-ammonia, salicylate of soda, ergot, and (2) those to which a specific action has been attributed, as phosphorus, salicin, tuberculin, iodide of starch, iodide of potassium and arsenic. Unna has obtained only negative results with the iodides and arsenic; with tuberculin he has produced good effects, but no cure; with phosphorus and salicin he has had no experience. He has had favorable results from the use of carbonate of ammonia, ichthyol and salicylate of soda in cases with a tendency to œdema and hyperæmia, but he does not believe that any case has ever been cured by the use of any of these internal remedies alone without the aid of external means. Many cases, however, have certainly been cured by the sole use of external applications. He disagrees with Professor White, of Boston, as to the prognosis, and holds that the disease can often be cured by the proper use of remedies. Unna's description of the treatment which has been most successful in his hands is exceedingly full and minute, and it would be impossible to describe it satisfactorily in an abstract. Among the external remedies which he has seen to do most good is the following prescription:

℞.	Zinci ox.,	
	Boli rubræ,	āā 2.
	Boli albæ,	
	Magn. carbon.,	āā 3.
	Amyli,	10.

Another one which, long continued, he has found to be followed by a cure in a number of cases, without the help of any other remedy is a combination of soap collodion, as in the following formula:

℞. Collodion, 20.
Sap. virid., 2–4. M.

Unna has also seen a singularly favorable effect from pure metallic mercury used in the form of a plaster and soap. The salts and other preparations of mercury have by no means so good an effect. In conclusion, he doubts if any remedies in cases of lupus erythematosus can be considered as specific, but holds that in the light of modern experience the group of alkalies and soaps approach this definition. In the second rank he thinks that mercury and pyraloxin may be said to have a specific action.

B. R.

PEDIATRICS.

UNDER THE CHARGE OF
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Results of the Immunization of Fifty Children. Coues (*Boston Med. and Surg. Jour.*, July 14, 1898) gives an account of the effects of the immunization of the children of St. Mary's Infant Asylum, Boston. An epidemic of diphtheria of unknown origin had broken out among them, and from February 15 to March 22, 1898, eighteen cases of the disease occurred. On the latter date it was decided to immunize all the children then in the asylum, and also all those that might be admitted. This plan was forthwith carried out, and for nearly three weeks from that date no cases of diphtheria occurred. At the end of this period, and before any children were immunized for a second time, cases of diphtheria again began to occur. They continued to develop until all the children were again immunized, and then, as at first, no fresh cases of diphtheria developed. The immunizing dose varied from ½ to 5 centimeters of a serum of 1000 units strength. Urticaria occurred in fourteen out of the fifty children who were given injections. The older children were not affected at all by the injections, playing about as usual. The infants cried and were restless for a few hours, and their temperature sometimes reached 101° F.—*Medical News.*

Reports of Five Cases of Stenosis of the Pylorus in Children are summarized in the *St. Petersburg medicin. Wochenschrift*, No. 34, 1898. Contraction of the pylorus, with secondary dilatation of the stomach, is one of the rarest diseases in childhood. In addition to the three cases recently communicated by Krassnobajew, only two have been previously published, both of them in Russian literature. One of these was reported by Selenkow and the other by Kolatschewski and Hohlgendom. The three cases of Krassnobajew were those of girls aged twelve, nine and seven re-

spectively. The first ended fatally and upon dissection there was found as a cause of the immense dilatation of the stomach a cicatricial stenosis of the pylorus from round ulcer. The same origin was attributed by the reporter to the case of a nine-year-old girl who had an enormous gastrectasia and was treated at a dispensary. The ectasia in the third case was also proved to be dependent upon stricture following round ulcer, and gastroenterostomy was done with favorable result. The author draws from these instructive cases the conclusion that in all instances of gastric dilatation which stubbornly resist treatment, a stricture of the pylorus should be suspected, and, when the diagnosis is reasonably certain, the sooner a radical operation is done the better.

Weill, before the *Congrès français de médicine, 1re session, 1898, Lyon*, contended that desquamation during typhoid fever is constant in children, especially on the covered portions of the body.

J. Nevins Hyde is authority for the statement that 90 per cent. of all children born alive with inherited syphilis subsequently die. Acquired infantile syphilis is very much more manageable.

In the Treatment of Cholera Infantum, Lesarge (*Montpellier Médical*, August 21, 1898) advises: 1. Strict diet; not more than 200 grams of milk or even nothing but cracked ice, to allay thirst. Ingestion of milk aggravates the digestive troubles. When gastro-intestinal symptoms have almost disappeared, feeding to be begun gradually, the milk at at first being iced. 2. Give twenty to thirty grams of cognac or rum per day, in four to eight doses, either pure with ice, or in black coffee, one teaspoonful of the alcoholic liquor to a tablespoonful of coffee. 3. Hot bath (98° to 100°) lasting ten minutes, morning and evening. Add a little mustard during the last few minutes. Gentle friction with warm cloths or cotton wool. Hot water bottle. 4. At first, while there is fever and no sign of collapse, give 1 cg. calomel in a teaspoonful of water every two hours for twelve hours; or the following:

℞.	Tr. Op. camphor (paregoric),	gtt. x.
	Acid. lact.,	ʒss.
	Syr. simpl.,	f ʒiv.
	Aquæ,	f ʒiij.
	Essent. menth. pip.,	gtt. ij.
S.	One teaspoonful with ice, every half hour;	

or the following mixture of HCl and lactic acid:

HCl or acid. lact.,	ʒss.
Aqu.,	f ʒijss.
Syrup,	f ʒiij.

During the period of algidity, twenty to twenty-five centigrams of caffeine in water, given in two to four doses, have a marked diuretic effect and heighten the arterial pressure.

Alcoholism in Children. Combe, of Lausanne, discusses (*Annal de Medicin et Chirurg. Infant.*) in an exhaustive manner the ways in which infants often become poisoned with alcohol and the effects. He points out that, on account of the greatly developed nervous system of children, the effects of alcohol are much more marked in them than in adults; and claims that poisoning by this drug is much more frequent in nurslings than is supposed. The most usual cause is the secretion of alcohol with the milk of intemperate wet nurses. A second cause is the practice of cleansing nursing bottles with alcoholic solutions before putting them into the mouths of infants. Combe describes two forms of alcoholism in nursing children: the acute and the chronic. The acute form arises from access to their systems of relatively larger amounts of alcohol whether mixed with their milk or with water. This is characterized by convulsions. Striking cases of it are reported by the author. In the chronic form the babies are excitable, poor sleepers, cry much and fail to take on flesh as they should. Both forms yield quickly when the nurse is changed or the alcoholization is stopped.

THERAPEUTICS.

UNDER THE CHARGE OF
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Unusual Symptoms Following the Administration of Antifebrin. P. V. Ballon (*Medical News*, 1898) records a case of a man, aged 45, suffering from a form of intermittent fever. The patient complained of almost unbearable headache; pulse, twenty; respiration, 23; temperature, 104.8 F. Ten grains of antifebrin were given, and about twenty minutes later the patient said his headache was relieved, and that he felt easier than at any time since the previous evening. About 45 minutes after the drug was administered all sweating ceased and a peculiar sensation of warmth under the skin was complained of. To this in twelve or fifteen minutes was added intense itching, while in three or four minutes the whole body presented a general erythematous condition. The entire surface was of a brighter red than that of a typical case of scarlet fever, and, like the scarlatina rash, it disappeared on pressure, to return as soon as pressure was removed. No part of the body was exempt from this rash, the conjunctiva, palms of the hands, and soles of the feet being as red as any part of the body. The temperature of the surface seemed elevated, but the thermometer in the mouth showed that it was gradually falling. The body appeared as if every superficial capillary was dilated, and an increased quantity of blood

was flowing through each. With the appearance of the rash the itching became more intense, the patient assuming all positions possible while scratching. Within the external ear the itching was especially intense, but there was no disturbance of hearing. The rash lasted for six hours, without any apparent change, and then disappeared rapidly from all parts of the body simultaneously, and as the rash faded the itching subsided. About the time the rash disappeared a slight cardiac irregularity became evident, and this lasted for four days. The only drug taken before the antifebrin was a single five-grain dose of calomel.

Poisoning by Sulphate of Pelletierine. At a meeting of the Société de Médicine M. Crolas (*Lyon Medical*, July 3, 1898) reported that he and M. Boyer had made an autopsy on a man 34 years of age who had died in a comatose condition some hours after taking a dose of 0.5 centigrams (7½ grains) of sulphate of pelletierine. Strychnine poisoning was suspected, but MM. Crolas and Boyer were able to prove that sulphate of pelletierine had been administered, finding the salt in the viscera. It was stated that the patient was an epileptic, and M. Crolas considers epilepsy as a contra-indication to the use of pelletierine. Both the sulphate and tannate of pelletierine are used as tenicides, the former in doses of five to six grains, and the latter in doses of fifteen to twenty grains. Usually some curariform symptoms are observed, motor paresis of the extremities, weakness of the legs, vertigo, cramps, nausea, and sometimes vomiting. The sulphate is much more dangerous than the tannate, and it is recommended to administer tannin at the same time as the sulphate of pelletierine.

Quinine in Labor. Schwab (*La Med. Mod.*, 1897, No. 3) says that while quinine sulphate has little or no power for inducing labor pains, he is positive that after uterine contractions have begun the administration of quinine causes them to become rapid and energetic. While quinine strengthens the labor pains, it does not tend to induce abortion. Unlike ergot, it causes intermittent and not tetanic contractions, and may, therefore, be prescribed without danger during the second stage of labor. Its action begins in about one-half hour; the drug is, therefore, best given in two doses of eight grains each, within a period of ten minutes. He has obtained excellent results from its use in all cases of prolonged labor due to uterine inertia. While quinine has a tendency to produce post-partum hemorrhages this is easily controlled by massage of the uterus.

Hydrogen Dioxide for the Removal of Wax from the Ear. The *Union médicale du Canada*, for January, states that Alberto Ricci, of Turin, has ascertained that the *solution of hydrogen dioxide possesses the peculiar quality of rapidly disintegrating* the obstructive masses of cerumen in the ear. It suffices to pour into the meatus audi-

torius externus a small quantity of the solution, and leave it for a few minutes in contact with the ceruminous plug. The latter is then most easily and safely removed by syringing with water, even though it were a hard concretion.

Diuretin. From very numerous trials, Professor Gram, of Copenhagen (*Therapeutische Monatshefte*), concludes that diuretin possesses a very powerful diuretic action, and that this is due to a direct influence on the kidneys. Diuretin is readily absorbed into the system, is non-toxic, as only in one case was a slight vertigo experienced. The daily dose is about ninety grains, given in single doses of fifteen grains each. The quantity of urine is frequently increased fivefold by the administration of diuretin.

The Action of Thyroid and Parathyroid Extracts Upon Metabolism in the Insane. C. C. Easterbrook (*Lancet*, August 27, 1898) reports experiments made by him upon insane patients by administering to them extract of parathyroid and thyroid glands. The former were removed from an ox, and administered either dried or fresh by the mouth, or in glycerine or ethereal extract hypodermatically. No effects were produced. Thyroid extract was administered in doses of sixty grains every day for six days. The loss in weight usually amounted to seven or eight pounds. Perspiration was increased; headache, tingling in the limbs, the proportion of hemoglobin diminished, tremens, palpitation and syncope were frequently observed. In about two-thirds of the cases, there was subfebrile elevation of temperature, and in about one-sixth of the cases, a rise of from two to three degrees. In some of the cases the respiratory rate was increased from six to ten per minute. Menstruation was rendered more profuse. Thirst was commonly increased, the appetite diminished while taking the drug, but subsequently greatly increased. He comes to the conclusion that thyroid extract is a profound katabolic stimulant, and accelerates the oxydation of the tissues, and the symptoms indicate a specific stimulation of the nervous system.

Grave Local Accidents Following the Use of Cocaine. In a case cited (*Annales des mal. d'oreille*, etc., No. 5, May, 1898) the pharynx was painted several times with a one-tenth solution of cocaine and some of the drug injected into the larynx as far as the glottis, about 20 cc. of cocaine being used altogether. Half an hour later the patient was seized with frightful burning in the throat, pains in the ears, dysphagia and salivation followed by desquamation of the tongue, anorexia, fever and marked nervous symptoms. The patient was a week recovering.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF
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Autopsy Findings in Yellow Fever. Dr. Eugene Wasdin, Passed Assistant Surgeon, U. S. Marine Hospital Service (*Boston Medical and Surgical Journal*, September 15, 1898), in a timely article on the above subject, says that all subjects dead from the disease bear a close resemblance to each other. The body is usually quite rigid, this change coming on early and persisting. The color is invariably more or less intensely yellow, and is due to a mixed hepatogenous and hematogenous jaundice. The entire skin is tinted, the scalp usually presenting a startling contrast to the parted hair; the whites of the eyes are yellow, the change taking place in the conjunctiva early in the disease, the scleræ becoming tinted later. This yellow tint is always contrasted with the deep purple discolorations from hypostasis which quickly appear in the skin of the dependent portions of the body after death, and which frequently appear before. It is at the edges of these hypostatic areas that the mixture of biliary and blood jaundice is particularly noticed as a muddy, thick, grayish-yellow tone. Hypostasis is common to all cadavers, but particularly is it prominent in this disease. It is not confined to the lower portions of the body, but invades the neck, chest, ears and face; the genitals, as a rule, and the finger and toe nails are of a deep purple color. This discoloration occurs quickly and is prominent within an hour after death. The pupils are usually dilated, the tongue foul and the gums bloody; the anterior nares are caked with blood. This, the writer says, is a picture of a typical yellow-fever cadaver; the appearances may be accentuated or softened, but the characteristic ensemble will be present in all. The resemblance externally of the yellow-fever cadaver to that of a person who has died of malarial fever is often very striking. There is in yellow fever a general yellow tinting on section, and the spleen, in complicated cases, is of normal size and appearance. The kidneys are always congested and swollen, and on section show fatty areas, about the base of the pyramids within the cortex. The liver is usually normal in size and shows marked fatty changes. The vessels of the stomach walls are congested, the mucosa thickened and presenting numerous patches of extravasation and shallow erosions. The lungs are congested and yellow; the pleura and pericardium present numerous ecchymoses, as well as the heart muscle. Histologically the fatty changes are best seen in the liver and kidneys; the liver cells are

more granular, stain more faintly and contain numerous fat droplets; those of the kidneys lining the tubules, especially of the cortex, are also filled with drops of fat. The frequent importance of an immediate diagnosis often renders the demonstration of the finer histological changes impossible for practical purposes. The writer discusses briefly the bacteriology of the disease, and some personal experiments in which he was able in many cases to isolate a bacillus which gave rise on inoculation to characteristic lesions. These organisms elaborate a toxin which exerts a characteristic and powerful influence upon the vasomotor system, as evidenced in the intense engorgement of the vessels, the gaseous, toneless pulse and the full diastolic heart, prior to a post-mortem; also, in that rapid metamorphosis of the albuminoids of the highly organized cells of the liver and kidneys. Dr. Wasdin quotes an interesting case occurring recently at Key West, in which, after careful examination, he concurred in the conclusion that the patient had died of yellow fever, but was later convinced that it was simply an intoxication from auto-infection with some member of the colon group of organisms.

Atrophic Cirrhosis of the Liver, of Gastric Origin. Naame, of Jaffa (*Journal de Medecine Interne*, second year, No. 17, Sept. 1, 1898), considers in this article a form of hepatic cirrhosis which he believes to be secondary to chronic parenchymatous gastritis, associated with dilatation of the stomach. The theory advanced is that, in the contents of the dilated and diseased stomach there occur chemical changes, probably brought about by bacteria which directly or indirectly lead to the development of certain poisons which pass to the liver, giving rise to degenerative changes in the periphery of the lobules, followed by the development of a substitutive fibrosis. The opinion is based upon the observation of the condition in peasants in the district of Hebron. These peasants do not use alcohol or wine, thus excluding both alcohol and vinous potassium salts as probable causes of the cirrhotic condition. Following the article by Naame is an unsigned criticism with a liberal bibliography. The critic calls attention to the insufficiency of the evidence submitted by Naame. The two articles lead one to understand that certain cirrhotic conditions of the liver may be explained on the basis of the absorption of some products of fermentation originating in the diseased stomach and brought about in the manner indicated above. The symptoms of cirrhosis, notably the ascites, quickly subside after dietetic treatment of the gastric condition. C.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF
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Golf an Aid in Psychic, Mechanical and Hygienic Treatment. By Irving C. Rosse, M.D. (*Trans. American Neurological Association*, 1898.) The game can be played all the year, independently of atmospheric vicissitudes, during all the seven ages of man, by delicate young girls as well as by strong athletes, and even by decrepit old men whose declining powers do not admit of severe exertion. It combines exercise, pleasure and fresh air without that risk of injury to heart, lungs or nervous system as is the case in certain other exercises in which there is high blood pressure and arterial tension. There is absolutely no danger attached to the game and consequently no accidents ensue. Unlike the bicycle, it is doubtful if such a thing as an accident insurance was ever paid for injury incurred at golf. Nor is the game contra-indicated in heart lesions, arterial calcification, albuminuria, old age, childhood or certain hysterical conditions which would be aggravated by such exercise as bicyling, swimming, horseback riding or by mountain climbing. In all affections marked by slowing of oxidation or in those consequent upon intoxication by the products of organic disassimilation, the game of golf is to be recommended as the best method of bringing about a cure. The obesity and degeneration of middle age, when the biceps has diminished and one's energy is failing, may be helped by devotion to golf. The further tendency of the exercise is to eliminate the so-called diatheses and thus do away with gout, lithæmia, headache and dyspepsia; while its hygienic and therapeutic consequences are admissible in cardiac and pulmonary affections. Although moderation is advisable under such circumstances, there can be no doubt of the benefit derived in some cases of cough, nervous asthma, and in affections of the bladder and prostate; but it is preëminently in functional nervous disease that our great Anglo-Saxon game is to be recommended both as prophylactic and curative. No exercise or recreation is better fitted for the mentally over-worked, the hysterical, the melancholic; none helps to preserve the concerted action of eye, brain and muscle known as the psychological moment; none, perhaps with the exception of swimming, gives one so good an appetite; there is not a more sovereign remedy for dyspepsia, and as to insomnia such a thing scarcely exists among the devotees of golf.

SURGERY.

UNDER THE CHARGE OF

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The Treatment of Vegetations on the Genitalia by Resorcine. Silbermintz (*Gazette des Hôpitaux*) employs resorcine in the following manner in destroying vegetations situated in the region of the genital organs. If they are isolated and have pedicles surrounded by normal skin, he paints them with pure resorcine, using a brush slightly moistened and covering them over with dry dressing. The applications are repeated daily till they dry up and drop off. When they are multiple and sessile, situated on the prepuce, the glans, in the balino-preputial groove, the inguinal fold, about the anus or around the vulva, he paints them over with a collodion containing ten per cent. of oil and twenty per cent. of resorcine. The parts should be made perfectly dry and the collodion should extend an eighth of an inch upon the surrounding sound skin. After the first application the epidermis will be removed with the collodion, and successive layers with each application till finally an ulcer results, pitted where the roots have been removed. Slightly astringent dusting powders will rapidly heal it. Where the skin is dry, as on the scrotum or external aspect of the labia majora, the author employs a fifty per cent. resorcine collodion. In all cases a boric acid wash should be ordered in conjunction with the applications.

Local Anæsthesia. (*Klin. Therap. Wochen.*, Wien, No. 18, 1898.) In a lecture before the German Surgical Society Dr. Fr. Rubinstein states he has used ethyl chloride, aneson (Roche) and Schleich's solution for the purpose of producing local anæsthesia. The ethyl chloride was used for short, quick operation, such as extracting teeth; and that when applied directly to the gum and also in the cavity of the tooth, the extraction was usually painless or nearly so. In nervous women and children, however, the fear of pain usually interferes with its success. He had used aneson (Roche) in several small operations, such as extirpation of ganglions, puncture of bursæ, etc, but intended to give a fuller report later. Schleich's solution he has used in over 200 cases, both in minor and major operations. The syringes used for the injections hold 2, 5, 10, 20, 30 cm. and are packed with asbestos or rubber. They are sterilized by boiling before each application. The needles vary in size up to 12 cm. in length. In two cases, one on the eyelid, the other an inguinal bubo, he was unable to anæstheticize, and had to use chloroform; another, an operation

upon the knee joint, which progressed without any interruption at all until he abducted the limb to cause the wound to gape, when the patient complained of so much pain that the operation had to be stopped. He noticed that after circumcision more œdema followed than usual, and in other localities he was sometimes annoyed by the tumor produced by the injection. Thinking that it was due to the morphia which the original solution contained he left it out and found that less œdema was produced. He concluded that local anæsthetics should not be used in young children, nervous patients or in operating about the eyes. The field of operation should be well under the control of the operator, and, although major operations may be carried out under these forms of anæsthesia, he still believes their use to be limited.

NEWCOMET.

The Treatment of Chronic Ulcer of the Leg. Charles H. Thompson, M.A., M.D. (*Lancet*, August 27, 1898), has employed strapping with success in forty cases of leg ulcer. Nearly all had had months of hospital treatment up to the time strapping was commenced, but with little or no improvement; in some instances the ulcers extended. Many of the patients had varicose veins, and œdematous legs, and they almost invariably expressed themselves as much relieved soon after treatment was begun. The strappings were made with the ordinary adhesive plaster spread on stout, pliable holland and supplied in 12-yard rolls 16 inches wide. It must be cut into various lengths according to size of leg, each length being about $1\frac{1}{4}$ inch wide, and applied so that the strips overlap by $\frac{1}{3}$ inch. It is best to include the foot, commencing at the base of the toes and carrying the strapping up the leg to three or four inches above the ulcer, which is thus completely covered in. A strong cotton bandage should be applied over all, reaching from the toes to the knee, and this should be changed by the patient daily or as often as it becomes soiled. If vesicles and excoriations form, an ointment composed of equal parts of zinc ointment and soft paraffine, applied on lint, the whole being covered with strapping and care being taken not to allow the lint to come too close to the ulcer.

Stab Wound of the Thoracic Duct.—Recovery. W. H. Lyne, M.D. (*Maryland Med. Jour.*, September 10, 1898), reports the above condition in a negro, 24 years old, of splendid physique. On examination an oblique stab wound about one inch long, depth unknown, was found above and behind the left clavicle and parallel with the outer border of the sterno-cleido-mastoid near its attachment. A longitudinal wound of the thoracic duct was the one therefore possible. The hemorrhage had stopped, but an abundant milky fluid was steadily escaping from the wound. The wound was cleansed with hot carbolized solution, and packed with iodoform gauze and bandaged. On removing the dressing about seven hours thereafter, the escaping chyle and oozing had completely stopped, and the

dressing was reapplied. The patient was allowed a light diet; his recovery was prompt and uneventful, except for a slight suppuration. The patient was discharged nine days after his admission, complaining only of a slight stiffness of his left arm. He was seen two years afterwards, and was enjoying perfect health, weighing ten pounds more than he ever weighed before the accident. No microscopical or analytical examination of the chyle was made.

Remarks on the Mortality from Cancer. W. Roger Williams, F.R.C.S. Eng. (*Lancet*, August 20, 1898), refers to the fact that the Registrar-General's reports keep on repeating that the cancer death-rate is the "highest on record," and yet that these reiterated warnings, which have been going on for more than half a century, pass unheeded by the mass of the profession. He cites tables of statistics showing that the percentage of mortality from cancer in England and Wales has steadily increased from 1 to 5,646 in 1840 to 1 to 1,306 in 1896. Meanwhile the proportion to total deaths has increased from 1 to 129 in 1840 to 1 to 22 in 1896. Williams considers the chief cause of this markedly heightened mortality from cancer to be the increase in the consumption of animal food and a coincident deficiency of exercise. He notes also the interesting fact that this increasing mortality from the disease in question involves males to a much greater extent than females. For instance, in the decade from 1851–60 the sex ratio of the cancer death-rate in men to that among women was 1 to 2.2, while in 1896 it was 1 to 1.4. Thus, while the mortality from this cause for males has increased 167 per cent. from 1851 to 1896, the increase for females has been only 91 per cent. Williams attributes this to the increasing urbanization of the population which has more nearly approximated the unhygienic conditions under which the two sexes live—especially as to lack of outdoor exercise.

The Treatment of Tubercular Osteo-Arthritis. (*Gaz. des Hôp.*, June, 1898.) In a paper read before the Congress for the Study of Tuberculosis, Redard says that he has had great success in the treatment of tubercular arthritic disease by the peri- and intra-articular injection of five to ten per cent. emulsions of iodoform in olive oil. The oil must be absolutely sterile, and the field of operation, the syringe and needles carefully sterilized. Where there is a large amount of fluid in the articulation, sufficient is withdrawn before the injection to reduce the intra-articular pressure. The method is more easily applied to some of the joints than to others, and is especially indicated in the tubercular arthritis of children, where fungus growths are extensively developed in the synovial pouches. His results are the most favorable in cases where the knee was involved and there was no fistula. The successes were less frequent when the elbow, wrist, or tibio-tarsal articulations were the seat of the disease. Recurrence was rare, and loss of function occurred in very few of the cases. In cold

abscesses, as in Pott's disease, the cavity was washed out with an aqueous solution of β-napthol of ten per cent. strength before the iodoform emulsion was injected. The greatest efficiency was noted where no fistula existed, as was also true of the articular disease. His experience in the employment of oxygenated serum as recommended by Luton of Reims have been very encouraging. The formula employed was:

Phosphate of soda, 1 in 10,	3.
Water oxygenated to 12 volumes,	1.

In five cases of cold abscess in various regions, the injection of oxygenated serum in the dose of one-half to one drachm repeated two to four times at intervals of from eight to twenty days, produced complete cures. These injections act better in cases where fistulæ exist than the iodoform emulsion. In three cases of cold abscess with fistulæ arising from coxalgia deep injections of oxygenated water repeated every third day produced progressive diminution in the suppuration and closure of the fistula.

Stray Thoughts on the Chloroform Problem. James Christian Simpson, M.D. Ed. (*Medical Press*, Nos. 3092 and 3093), discusses at length the use of chloroform as an anæsthetic. Surgeon Lieut. Col. Lawrie claims that a death from chloroform is rare in India, and remarks that, "There is something wrong somewhere" in regard to the diversity of opinion as to the cause of death and the wide variance of statistics in different places, and by different authors in some places, as in England, they range from one fatality in 1,126 cases; to one in 6,700. In a series of 41 cases, 39 died before the surgeon touched them, showing that the drug was alone responsible for the deaths. Lawrie does not think that climate or country has any influence upon the matter; the author, however, is inclined to think that it has in a slight degree, but more in regard to altitude, which favors evaporation, especially of such a liquid as chloroform. He draws attention to the immunity of parturient women and, so far as reasoning from experiments goes, cases of this class should show marked influences toward fatality; the sudden drain upon the system would more than counterbalance the hypertrophied heart and high blood pressure of the beginning stages. He thinks that position has more to do with this so-called immunity, as most women are on their left side during labor. That in this position the head is low, and this allows these heavy gases, chloroform and CO_2 contained in expired air, to draw away easily, and in this way cause no interference with respiration, and consequently less liability to heart failure, or spasm of the glottis. He mentions experiments and observations to sustain this view. A large number of deaths, he believes to be due to the depression of the jaw either to remove mucus or saliva or while operating in that locality; this is especially dangerous for the reason that it cuts off the most needed air supply by narrowing the fauces. Both methods of resuscitation, the Sylvester and the inversion, have failed

in given cases and great judgment must be shown in deciding which to use first; he considers the Sylvester method the more dangerous on account of its liability to lodge mucus in the air passages and cut off the supply of fresh O to the lung. He believes if the air passages are unobstructed and if respiration is not interfered with by pressure outside the body by clothing, instruments, etc., or any other cause, heart failure is not liable to follow, and ends his conclusions by stating "Every death under an anæsthetic is not necessarily from the anæsthetic, and in every case there are at least four factors: the drug, the patient, the administrator, and the means adopted to restore.

NEWCOMET.

Gonorrhœa in Little Girls. Professor W. Nolen Leiden (*Alg. Wiener Med. Zeit.*, Sept. 6, 1898) is quoted as reporting eight cases of gonorrhœal infection or vulvo-vaginitis that recently came under his care in the children's wards. The infection was traced to the use of unclean sponges. The course of the disease showed fever for one day, with a general unrest and uneasiness; the fever lasted but a day, though in one or two cases a subsequent exanthema was observed. The urethra was involved in some cases, but without interfering with the voiding of urine. The profuseness of the discharge showed that the vaginal mucous membrane was involved. The disease was not harmless. The author had seen no case in which absolute cure occurred. Later examination always discovered leucocytes that contained gonococci in the vagina, especially if a little distilled water was allowed to remain in the vagina for a day. Some cases of chronic rheumatism in children were found to have gonococci in the secretion of the vagina. Articular rheumatism is not rare in these cases. In one case it developed on the third day. In another case a gonorrhœal tendo-vaginitis was observed. In other children small pustules were found that contained gonococci. In one case circumscript, in another general, peritonitis developed. It is probable that the results of such early infection often persist in the woman and become complications in gynæcological cases.

Benign Tumors of the Rectum. After a critical study of these tumors L. Longuet (*The Prog. Med.*, Nos. 35 and 36, 1898) arrives at the following conclusions: The existence of myxomata, enchondromata and pure fibromata of the rectum is definitely excluded. On the contrary lipomata and fibromyomata are not very rare and are undeniably found. A large number of the so-called fibrous polyps of the rectum are myomata, if they are not the simple products of inflammation. Lipomata, when they are pedunculated, can be recognized by their fine lobulation. Myomata are, on the contrary, firm in consistency, irregular in outline, and may reach a great volume (twelve pounds). Sometimes they develop in the lumen of the rectum and rapidly become pedunculated. Sometimes they develop

excentrically and find lodgment in the sacral fossa or even extend into the peritoneal cavity. Histologically, and in their macroscopic appearance, they resemble uterine myomata. If, on the one hand, the diagnosis between malignant tumors and adenomata is difficult, it is, on the other hand, good practice to remove them and all papillomata, condylomata and fibrous remnants of hæmorrhoids. The persistence of rectal troubles, tenesmus, repeated rectal hemorrhages, incomplete obstructions which are frequently found make the prognosis in these cases dubious, although they are benign in their character. The prognosis is particularly bad in the excentrically developing myomata, as surgical relief is difficult. The removal of tumors in the cavity of the rectum is easy, but to remove the excentrically situated tumors the para-sacral incision, with or without the removal of the coccyx, is essential. When they are situated very high up an abdominal incision or even combined incisions may be necessary and there is always danger of opening the rectum. There may be angioma, teratoma and dermoid cysts of the rectum, but the small number of cases reported makes it impossible to study them completely.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

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Nasal Hemorrhage and the Hæmophilic Diathesis. Under this heading M. A. Goldstein in the *Medical Fortnightly* divides the etiology of the affection into two classes: first, traumatic; second, idiopathic. The first group comprises those cases due to injury as well as those in which the bleeding is caused by operative procedure. In neither instance is the hemorrhage regarded as of moment and he advocates the use of Marchand's concentrated preparation of peroxide of hydrogen, hydrozone, in spray and on cotton pledget, as a most efficient and cleanly hæmostatic as well as bactericide. A spray of hot vaseline or vaseline coated cotton pledget firmly inserted has proved efficacious in his hands. He deprecates the use of such agents as the iron astringents and the extract of geranium because of the disagreeable clot formed, the danger of infection through this source and the danger of again causing hemorrhage when attempting to remove the tenacious coagula. Under the second class he describes an interesting encounter with nasal hemorrhage occurring in a hemophiliac. The point of bleeding was situated in the small depression in the anterior portion of the septum just posterior to the columnæ. After three hours, during which time he employed all the hemostats mentioned with the addition of

trichloracetic acid, the chromic acid bead and the galvano-cautery bulbous pointed electrode, the hemorrhage ceased. Four days later the patient was again seen, the points of cauterization had formed ill-smelling sloughs which, when removed, started the hemorrhage anew with a similar experience as to the impotency of the hæmostatics usually efficacious. Ergot was administered in this case by the mouth. A note of warning is sounded as to the desirability of obtaining any hæmophilic tendencies before operation.

(NOTE.—It might be worth the trying in these cases to administer every hour ten-grain doses of calcium chloride well diluted in cinnamon water to obtain its well-known coagulative effect.)

Intubation for Croup in an Infant of Seven Months, with Maintenance for 390 Hours of the Tube in the Larynx and Nine Replacements in the Space of 22 Days. A. Bonain (*Revue Hebdomadaire de Laryngologie, D'Otologie et de Rhinologie*) reports a case of intubation for croup in an infant of seven months. He considers the case interesting because of the tender age of the patient, the number of times the tube was introduced and kept in position, with a complete cure. He prefers an ivory tube because of its lightness, the greater size of the lip and belly retaining it in position more easily than the metal tube. Its lightness also tends to obviate ulceration and consequent cicatricial stenosis. At one stage of the case, the child, apparently dead, was revived by the introduction of the tube and artificial respiration.

A Case of Pseudo-Membranous Rhinitis. A. Cartaz (*Revue Hebdomadaire de Laryngologie, D'Otologie et de Rhinologie*) reports a case of pseudo-membranous rhinitis. He regards the majority of cases so reported to be due to the bacillus of diphtheria in a greater or less degree of attenuation. He remarks on the length of time they persist, Concetti reporting one lasting three months, and Gérard Marchant another that persisted for six months without general infection. He regards these cases as being feebly contagious. The peculiarly interesting point in his case is the lighting up of an old syphilitic manifestation on the side of the nose which had been supposedly cured by proper specific treatment. Further exhibition of anti-syphilitic treatment causing a prompt amelioration of the condition led him to believe the case one of pseudo-membranous rhinitis in a syphilitic subject, the rhinitis having given place to the tertiary ulceration on the septum.

(NOTE.—While in many cases bacteriological investigation shows present typical diphtheria bacilli, yet the most careful investigations have failed to show their presence in some cases, the condition being purely a fibrinoplastic inflammation. This is especially true in the chronic variety, which the above reported cases undoubtedly were.)

Spontaneous Discharge of a Foreign Body of Large Size from the Maxillary Sinus. Puncture through the alveolar process was resorted to for disease attacking the maxillary sinus. The perforation was closed by a tube No. 15. Injections are kept up twice a day by the patient himself. Three months after, the tube, having become loose, was forced in the perforation too far and could not be withdrawn. All attempts at extraction proved unsuccessful. The tube disappeared within the sinus and I had to be content with inserting another tube larger and continuing the injection. Three weeks after tube No. 15 was expelled through the nose in the course of an injection (Dr. Ripault, de Dijon).

Wool Tampons in the Control of Nasal Hemorrhage. Bernard Berens, in the September *Laryngoscope*, advocates the insertion into the affected chamber of tampons of sterilized lambs' wool tightly rolled and impregnated with powdered boric acid, nosophen or peroxide of hydrogen. The expansion of the wool will arrest the hemorrhage. To remove the plug instill several eye pipettefuls of benzoinol.

Injury to Inferior and Middle Turbinates in Operation for Deviated Septum. J. A. Stucky (*Laryngoscope*) finds that the insertion of Asch's tubes after operation for deviated septum has in several cases done injury to the middle or inferior turbinate of the affected side. This is due, he believes, to the width and caliber of the tube binding down, pressing upon, and fracturing the turbinates by hasty or over-forcible insertion. As a remedy he proposes a splint of "vulcanized or dental rubber (half tube or grooved) wide at bottom, narrow at top, external end a little larger than the internal."

(NOTE.—This is a defect I have noticed, but remedied by using coin silver tubes that I could mould in the desired shape to fit the enlarged turbinate.)

OPHTHALMOLOGY.

UNDER THE CHARGE OF
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Recent Improvements in the Operation of Enucleation. The result from a cosmetic standpoint is a consideration of the greatest importance in enucleation of the eyeball. Various substitutes and modifications of enucleation have been suggested; but as the greatest indication, threatened sympathetic inflammation, can only be safely treated by complete enucleation, such methods as evisceration, Mules' operation, etc., have only a limited sphere of definite usefulness. Sponge-grafting was first suggested by D. H. Hamilton and Norman Porritt in the *Edinburgh Medical Journal* of 1881 and later. Belt, of Washington, in the *Medical News*, June, 1896, reported five cases of sponge-grafting in the orbit after enucleation. Risley (*University Medical Magazine*, Septem-

ber, 1898) reports a case as follows: The eye was dressed as after an ordinary enucleation. The operation was followed by no reaction, pain or swelling of the lids or tissues in the orbit. There was no discharge and the conjunctiva covering the sponge presented a uniform red appearance. The sutures were removed on the fifth day. On the eighth day the conjunctiva wound had opened, leaving a horizontally oval window into which the sponge mass protruded. There was no pain and no discharge from the conjunctiva, but the surface of the sponge was covered by a homogeneous yellowish-white, tenacious layer, which could be wiped away in stringy masses. The sponge, on pressure exerted through the lids, exuded from its interstices an abundance of a lymph-like exudate. The lids were closed and a protective bandage reapplied. On the tenth day the sponge mass was still more prominent and was bathed in the exudate. The patient was entirely comfortable, and there was no inflammatory reaction. He was then placed upon the operating table and the most protuberant part of the sponge shaved off with scissors. When seized with forceps it was found soft and friable, easily breaking down under the grasp of the forceps, indeed presenting none of the characteristics of the original sponge other than its cell-like structure and color, and the cells were found filled with exudate which exuded under pressure. After cutting the surface a slight salmon-colored staining was observed creeping in from the periphery, evidently from several blood vessels which were being projected from the surrounding tissues into the sponge mass. It was everywhere firmly adherent to the surrounding tissues and could not have been removed without complete dissection. Two weeks after insertion the sponge presented a uniform homogeneous surface, yellowish-white, and tongues of granulation masses were seen projecting into its surface from the surrounding conjunctiva. The extra-ocular muscles move the mass freely in all directions. Three weeks after its insertion the same yellowish-white appearance continues, but the entire mass is smaller, and tongues of abundant granulations are penetrating it from all sides, which bleed freely when punctured. The patient returned to his home at the end of the second week. He has had no discomfort at any time. At last reports the sponge had entirely disappeared, the last remnants in the shape of granules soft and friable, being wiped away with a cotton brush from a small central pocket. The orbit was well filled with a firm mass of tissue, covered with conjunctivæ, which moved with great freedom in all directions, furnishing an excellent base for an artificial eye. The result in this respect was very much better than is usually seen after ordinary enucleation. The length of time, two to three months, required to complete the process of absorption of the sponge and its replacement by connective tissue, as an objection, is offset by the fact that the patient is in no way inconvenienced during the period of conversion. If the final result be good, no minor objection is valid. Bourgeois (*La Clinique ophtalmologique*, May 25, 1898) mentions the dangers and difficulties of Mules' operation and mentions a form of

operative procedure to replace it. He suggests that a small ball, made of silk wrapped over a nucleus of catgut or peat be inserted in the orbit instead of sponge. He suggests that the muscles be transfixed with catgut sutures before being cut and thus better secured. After the enucleation, the silk ball is inserted in the wound and the muscles are drawn together in front of it. Meyer (*Revue generale d' Ophtalmolgie*, May 31, 1898) directs that in order to attain the maximum mobility of the stump after enucleation we should preserve as far as possible the adherence of the muscles and conjunctiva. In operating he carefully dissects the conjunctiva from the sclera, going down between the muscles. The capsule of Tenon is dissected close to the globe and its muscular attachments are, as far as possible, retained. Meyer does not draw the ends of the interni and externi closely together, believing that they act better when sutured loosely with vertical interrupted sutures.

OTOLOGY.

UNDER THE CHARGE OF

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Foreign Bodies in the Ear. E. Fink (*Zur Casuistik der Fremdkorper in Ohre*) relates two extremely interesting cases of foreign bodies in the ear. The first of them concerned a peasant of twenty-eight who was attacked by left-sided deafness. Examination discovered at about the point of union of the cartilaginous and osseous portions of the external canal, a foreign body which proved to be a lentil and which had been within the canal for a number of years. Upon its extraction another body was seen at the bottom of the canal. With a pair of forceps the wing of a cockroach was removed and subsequent syringing brought away the rest of the insect very well preserved. Aside from a slight redness of the drum membrane and some injection of the vessels about the handle of the malleus, nothing abnormal was found. The patient had been entirely ignorant of the presence of the roach within the ear and was amazed at its removal. It was evident that the insect had entered the ear a long time previous to the introduction of the lentil and that its presence there probably dated from the early life of the patient. The second case was that of a woman who was the subject of a long-standing otorrhœa. For some time recently she had been suffering from violent pains in the ears, but that which disquieted her most greatly was the escape on different occasions of several worms from the auditory canal. Examination confirmed the truth of this surprising statement, and from the canal and tympanic cavity were removed more than twenty larvæ of the fly, each about one centimeter in length. By the subsequent use of the Eustachian catheter two more larvæ

were expelled. The patient stated that on several occasions the worms had made their way into the throat and had been spit out. This last case is unique in literature. We are all familiar with cases in which worms have entered the Eustachian tubes during the act of vomiting and have afterwards escaped from the auditory canal, but their migration in the opposite direction, from the ear to the pharynx, has not before been reported.—*Deutsche med. Wochenschrift*, No. 27, 1898.

A Case of Polyp in Shrapnell's Region of Remarkably Rapid Evolution. Dr. Ripault reports the following: A cabinet-maker, thirty-five years of age, syphilitic, presented himself with a purulent discharge from the right ear. Perforation of the tympanic membrane was found above the short process of the malleus. He was seen a month later, when, in addition to the discharge, he complained of pain, deafness, and the sensation of having a hard body within the external auditory canal. The snare removed an enormous polyp which had developed in the space of a month under the influence of the specific taint. Mercury and cleansing led to cure.—*Revue Hebdomadaire de Lar., d'Otol., et de Rhi.*, September 10, 1898.

A New Method of Mobilizing the Stapes. By Dr. Faraci. All the procedures for the mobilization of the stapes that have been employed hitherto, have involved a greater or less lesion of one or several of the parts of the apparatus for the transmission of sound. From his experience with this class of cases, the author has arrived at the following conclusions: 1. The ossicular chain is the principal means by which sounds, whatever may be their character, are conveyed to the labyrinth. 2. It is an error to base the diagnosis of a disturbance of audition simply upon the absence of the perception for sounds of high pitch. 3. Myringotomy and myringectomy in a normal ear reduce the hearing power only moderately, and this reduction embraces all sounds, simple or harmonic, whatever their timbre or pitch, with this difference, that the diminution of hearing is most noticeable for low notes not exceeding 512 vibrations per second, less so for the whispering voice or the watch, and least for high pitched sounds. If, however, there exists a lesion of the internal ear, then, according to the gravity of this, the loss of hearing for low sounds may extend even to those of 18,000 vibrations per second. 4. After the disarticulation and extraction of the hammer, the diminution of the hearing power is more marked, and, in an ear with a normal transmitting apparatus and only some lesion of the auditory nerve, one can have, according to the degree of this nerve alteration, either a considerable loss of hearing or complete deafness. 5. The results of mobilization of the stapes depend altogether upon the functional activity of the perceptive apparatus. If this is normal, the operation will always be of distinct benefit to the hearing; but if, on the contrary, there is some defect of this apparatus that

contributes, in association with the stapedial ankylosis, to the causation of the deafness, the results will be different according to the relative importance of these two factors. There may, perhaps, be a slight improvement of the hearing, or the result may be negative, or, finally, the deafness may be aggravated, even to the point of becoming complete. 6. Considering the importance to hearing of the transmitting apparatus, it would seem desirable to find some method of mobilization which would leave intact the ossicular chain and give results superior to those already obtained. 7. Realizing that it is often very difficult to make an exact diagnosis of the anatomical and functional conditions that lead to an impairment of hearing, one may be sure that, whatever may be the condition of the internal ear, there will never be any cause to regret leaving the chain of ossicles intact. As a consequence of all these conclusions, the author advocates for the mobilization of the stapes a procedure which gives to the surgeon an extensive view of the field of operation and leaves undisturbed the ossicular chain. It consists of a myringectomy followed by a resection of the external wall of the *aditus ad antrum*, and upon the completion of the operation, the displaced parts are returned to their places. The author uses an instrument somewhat similar to that employed by oculists for cataract discision, but with the difference that this knife can execute a variety of movements about its own axis, a feature that renders its management quite easy.—*Revue Hebdomadaire de Lar., d'Otol. et de Rhi.*, Sept. 17, 1898.

Diagnosis of Traumatic Affections of the Internal Ear. M. Müller (*Zur Diagnose der Traumatischen Affectionen des Inneren Ohres*) says that redness at the inner extremity of the auditory canal, persistent hyperæmia, a disturbed appearance and thickening of the drum membrane, with some bluish-red discoloration of it, are all symptoms of a labyrinthine disturbance, particularly when those symptoms are accompanied by a vascular congestion of the eye ground and when the patient can recall nothing that would have provoked an acute inflammation. Köppen has shown that after traumatism in this region the vessels of the temporal lobe are the first to dilate. The vascular engorgement increases the intralabyrinthine pressure and occasions vertigo and tinnitus. As a means of diagnosis, the salicylates, according to Kirchner, aggravate the labyrinthine hyperæmia and all its unpleasant symptoms, while, on the other hand, leeching, by its irritation of the skin and the subsequent contraction of the labyrinthine vessels that it effects, relieves these patients of the vertigo, the tinnitus and the cranial pains.—*Munch. med. Wochenschrift*, No. 23, 1898.

GYNECOLOGY.

UNDER THE CHARGE OF

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A Case of Recurrent Vulvar Growth. J. M. Baldy and Wm. Wells (*The Amer. Jour. of Obstetrics and Diseases of Women and Children*) report the case of a pregnant woman. She complained of intense burning vaginal pain around the vulva, and extending backward over the perineum toward the anus. On examining the vulva an ulcer was found on the left lesser labium and extending forward over the inner surface of the greater labium and backward slightly into the vagina. It extended down through the epidermis and was surrounded by a border of what seemed to be hypertrophied epidermal tissue. In color the ulcerated surface was reddish, not so dark as a specific ulcer. Near the vaginal opening a second smaller ulcer existed, and on the right lesser labium, on its inner side, there were some three or four similar ulcers. The patient gave a good family history. The most characteristic peculiarities of the ulcers were the intense pain and the rapidity with which they spread. On account of her pregnancy an operation was not deemed advisable, and the ulcers were dressed daily with equal parts of iodoform and dried alum, cocaine being first used to lessen the pain. After the birth of a large male child the growths shrank considerably and lost a great deal of their rapidity of growth, but it extended slowly backward across the perineum and encircled the anus. As the patient refused to have them excised they were removed with a Paquelin cautery, causing instant and positive relief which was continuous for several months until the growths around the anus began to increase and spread. Three years later this same patient came under Dr. Baldy's treatment. Examination revealed a growth, papillomatous in character, with small ulcers in places, extending from the fourchette and lower third of labium majus over the perineum toward the anus as far as the internal sphincter. The principal feature of the symptomatology was the continued steady and excruciating pain. A diagnosis of malignancy was made and the whole growth excised, and in spite of the report that "macroscopically and miscroscopically the diseased tissue showed nothing that would differentiate it from a simple chronic inflammatory hyperplasia," the author is unwilling to discard his opinion of malignancy, as the character of suffering the patient was afflicted with most commonly accompanies malignancy.

Nervous and Mental Diseases Following Pelvic Operations. Harold N. Moyer (*The Journal of the Amer. Med. Association*, September 10, 1898) says that even after studying individual cases and consulting statistics a conclusion on the above subject is with difficulty arrived at. In the cases operated upon for pelvic diseases the health is, as a rule, greatly impaired and a great majority of them are very much reduced by a long history of illness prior to the operation. The operations themselves are many times prolonged, and a by no means infrequent condition is the one of inflection, a slow poisoning of the system, for which the operation was undertaken. Those necessarily are apart from the operation itself, and they furnish a fruitful soil upon which nervous troubles and insanity are built. In comparing fifty cases of operation on the pelvic organs of the male with fifty cases of operation on the pelvic organs of the female he found that the nervous and mental effects following operations, which might be attributed to the operation *per se*, were much greater in the male than female. The author concludes by saying that he thinks there are no radical differences in the primary effects of operations upon the pelvic organs in men differing from the effects of similar operations in women, or, indeed, of operations in general surgery, and that there is a distinct and peculiar effect from the removal of the ovaries or tubes, or both, by which the menopause is established, but that it does not differ in its nervous phenomena from the menopause occurring normally at the ordinary time of life.

Sealing of Operative Wounds about the Abdomen. E. Stanmore Bishop, F.R.C.S. Eng. (*The Medical Press and Circular.*) Bishop advocates the sealing of abdominal wounds with celloidin—a transparent, closely adherent film with strongly contractile qualities, claiming a decreased area of the scar. It tends also to contract the skin vessels immediately around the line of union, so limiting the tendency to overfulness of those vessels after any traumatism. Its main advantage after the cardinal one of aseptic closure is its transparency. Even if the asepticity of the work is not perfect, it is an advantage to be able to see at once through the transparent dressing where it is faulty. Increased redness and heat are easily recognized, whilst the tension of increased swelling is quickly appreciated by the patient in its earliest stage, the celloidin being very resistent. The only drawback to its use has been its tendency to produce small blisters at its edge. The celloidin plate as its sets, contracts and drags upon the skin in all directions toward the line of union. Its edge frills, and just there small blisters will rise during the first two days.

The Indications for Plastic Surgery upon the Cervix Uteri; Tracheloplasty, with a New Method of Operating. H. P. Newman, A.M., M.D. (*Journal of American Medical Association*), believes that in the majority of cases amputation of the cervix, tracheloplasty should be em-

ployed, rather than Emmet's operation, or trachelorrhaphy, for lacerations of the cervix, plastic work looking toward the removal of diseased tissue, the restoration of organic function, and remodeling of the cervix to as nearly normal outline as possible. In his new method the writer employs a specially devised knife, removes the diseased tissue from the cervix, leaving flaps which, if properly made, fall together and inward so as to assume the appearance of a normal cervix, and require only the simplest suturing to keep them in this position. The advantages claimed for this method of operating are: 1. The quickness and ease of operating by the knife here presented, the manner of making the flaps, transcending in certainty and safety of execution the ordinary methods of excision. 2. Clean, smooth-cut surfaces which are obtained without haggling of tissues, always most desirable in plastic surgery. 3. The easy approximation of flaps and the avoidance of all hemorrhage beneath them by deep placing of suture and compression of the flaps. 4. The accurate approximation of mucous membrane to mucous membrane, thus avoiding granulating surfaces, formation of cicatrix and constricting of the canal. This feature, which obtains also in Schroeder's operation and modifications of it, is of great importance and a decided advantage over trachelorrhaphy, especially where the entire cervical mucous membrane is removed. 5. The certainty of obtaining a permanently patulous canal and a well-formed cervix with pronounced reduction of the hyperplastic uterus. 6. The simplicity of the after-treatment.

OBSTETRICS.

UNDER THE CHARGE OF

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The Treatment of Ruptured Uterus by Means of Gauze Packing. A. W. Mayo Robson (*The Practitioner*, July, 1898) holds that when rupture occurs before delivery and the child escapes into the abdominal cavity nothing but immediate abdominal section can offer any chance of saving the patient and it must be performed immediately on account of the hemorrhage and shock. If skilled assistance is not directly at hand it should not be waited for, but the best that can be secured at once should be used. This will often save the patient's life. In those cases where the rent is in the lower part of the uterus and occurs during delivery, but is not noticed until afterwards, when hemorrhage and increasing shock call attention to some serious condition, immediate operation is not necessary. To complete the diagnosis an intra-uterine examination may be necessary, but the best treatment is the gauze

pack. All fluid should be carefully pressed out from the abdominal cavity through the rupture which may be enlarged if necessary. The uterus should be curetted and a strip of iodoform gauze packed in, filling Douglas' pouch, the rupture and the upper part of the vagina and a firm pad should then be placed over the lower part of the abdomen. The packing should be changed on the third day and on every second day after that. This is usually all that is necessary in these cases and the recovery is uninterrupted.

GIRVIN.

Forty Cases of Fever in the Puerperium with Bacteriological Examination of the Uterine Contents. J. Whitridge Williams (*American Journal of Obstetrics*, Sept., 1898), during the period of two years, has had bacteriological examinations made in every case in which the temperature exceeded 101° F. (38.3°C.) at any time during the puerperium. The cultures were taken from the interior of the uterus. For the purpose of obtaining pure cultures from the uterine lochia the method introduced by Doderlein was employed. "In every case cover slips were made and the uterine lochia were plated upon ordinary agar, acid agar and glucose agar, and blood serum or blood serum and agar slants were inoculated and anærobic cultures made upon glucose agar by inoculating a melted tube, allowing it to solidify and then pouring the contents of a second tube upon it." With few exceptions the blood was examined in every case for malarial plasmodia. By these methods streptococci were found in eight cases; staphylococci in three cases; colon bacilli in six cases; gonococci in two cases; anærobic bacteria in four cases; unindentified anærobic bacteria in three cases; bacteria in cover glass but culture sterile in four cases; diphtheria bacilli in one case; gas bacilli (bacillus ærogines capsulatus) in one case; typhoid bacilli in one case; cover glass, culture and blood sterile in eleven cases; malarial plasmodia in one case." The practical value of the bacteriological examination of the uterine lochia is that by this and no other method can we arrive at a definite diagnosis, thereby excluding infection by the dangerous pyogenic bacteria. While, on the other hand, the examination of the blood would indicate or exclude malaria.

Vaginal Examinations and Vaginal Douches in Normal Labor. In the *Medical Record* of September 17, 1898, Shears discusses vaginal examinations and vaginal douches in normal labor. A very large proportion of the cases seen by the general practitioner are cases of normal labor in multiparæ, that would get along perfectly well without any active interference whatever. Many of them when first seen are so far advanced in the second stage as to have passed the time for most complications, and it is certainly deplorable that cases of this kind should become septic from unnecessary manipulations. All recent bacteriological investigations prove beyond the shadow of a doubt that, in a vast majority of cases, the ante-

partum antiseptic vaginal douche is not only useless but often harmful. Internal examinations in labor are not only often unnecessary, but are in themselves a positive evil, and should be employed only to avoid greater evil. The fact that surgeons of experience disagree as to the best method of hand disinfection confirms the conclusion of modern bacteriologists that no method is infallible. The author lays great stress upon the importance of abdominal palpation to determine position, presentation, and the advance of the presenting part. The common cause of unduly frequent vaginal examinations is the inexperience or indecision of the practitioner. We often find that those who criticise the use of the forceps in the performance of obstetric operations do not hesitate to incur the grave responsibility of making frequent examinations both before and after delivery. Admitting that in general practice many cases require a vaginal examination for one reason or another, it is a safe rule to follow that there is seldom occasion in normal conditions for more than one or two internal examinations at the most, during the expulsive stage. From the beginning of cervical dilatation until long after delivery we have a surface favorable to the direct absorption of septic matter. How inconsistent, then, to preach asepsis in obstetrics, and at the same time advise, as part of the treatment of normal cases, the frequent introduction of the one instrument which we cannot sterilize—the hand—and the use of douches which serve only to interfere with the conservative and reconstructive processes of nature. One cannot look over the obstetric literature of the day without the reflection that too large a proportion of it is devoted to the study of abnormalities and too little to the study of normal labor. It is unreasonable to suppose that the same examinations and manipulations are necessary in all cases. A sharp line should be drawn. Abnormal cases should be treated promptly and fearlessly, and normal cases should be let alone. They are dangerous only through unnecessary interference. To sum up, the common custom of making frequent vaginal examinations during the whole course of labor is unscientific and unsafe, and it should be the aim of the conscientious obstetrician so to familiarize himself with all extravaginal methods of diagnosis as to reduce the necessity for vaginal examinations to a minimum. All intravaginal manipulations are especially objectionable after delivery. When the vaginal secretions are normal, ante-partum douches are unnecessary and harmful. Upon this point the researches of Leopold and Goldberg, as well as those of Fischel and others, seem to be conclusive. In normal cases the single post-partum douche is unnecessary, and, therefore, objectionable, but in some cases circumstances render it advisable as a precautionary measure. The routine use of douches during the normal puerperium is contra-indicated. Lusk says: "In hospital practice they have invariably increased the morbidity and the mortality rate." The ideal labor case is one in which the existence of pelvic contraction or other abnormality is disproved before labor, in which the progress of labor is observed by extravaginal

methods, and in which nothing is permitted to enter the vagina after delivery. That this ideal cannot always be reached goes without saying. That we should get as near to it as we can is equally true.

The Use and Abuse of Midwifery Forceps. In a recent discussion of the above subject held by the Section on "Obstetrics and Diseases of Women" of the British Medical Association, R. Milne Murray considers the indications and contra-indications of the obstetric forceps. After dwelling upon and criticising the widespread notion that obstetrics of the present day is too surgical, and that as a result, the practice of gynecology has become largely surgical, he maintained that the special value of obstetric forceps is to shorten the suffering and to diminish the risk of childbirth, and to greatly increase, oftentimes, the safety of the child. He discussed in detail his conclusions: (*a*) that the forceps is often used at the wrong times; (*b*) it is sometimes not used at the right time; (*c*) it is often badly used at both times. To help make plain the statement that a direct indication for the use of the forceps arises whenever—and only whenever—we are assured that the danger of interference has become less than that of leaving the patient alone, he discusses first the use of forceps in an undilated os. In only a small minority of cases is it justifiable to apply forceps in an undilated os, and the disastrous results following such an application are only too familiar to obstetricians. There is, however, a form of undilated os quite as unsuitable for the forceps operation as the ordinary variety due to the early rupture of the membranes, to narrow pelvis, to malpresentation or to other well-recognized causes. The author refers to a form of spasmodic rigidity which is the more dangerous because it is not always recognized. He refers to a spasmodic contraction of the os *during a pain* instead of the usual dilatation common to each uterine contraction. The os during the interval between the pains is soft, flabby and easily stretched, and an examination made at this time makes one conclude that the forceps can be used with facility. During the pain, however, the os is often tense, hard and greatly narrowed. To use the forceps here, and to treat the case as if the os were dilated or dilatable, is one of the gravest examples of its abuse; very slight efforts of traction will tear the cervix into the vaginal roof, inflicting frightful injury. Secondary inertia is also a contra-indication. The almost inevitable results of deficient retraction and alarming post-partum hemorrhage are other instances of the application of the forceps at the wrong time. While considering the neglect to use the forceps when necessary, he discusses the time-limit, so frequently taught as from two to four hours after the head has failed to advance. If one is certain that the advance of the head is blocked after dilatation of the os, and he can be certain as to most cases within a very short time, nothing is to be gained by further delay, and the danger of interference is then less than the danger of waiting. There is no wiser obstetric aphorism than this: "Wait till you see what Nature

can effect—not what she can endure." As to the application of forceps in occipito-posterior positions his view is, that when flexion is deficient, as shown by the ease with which the bregma can be reached, the sooner forceps is applied after the os is dilated the better. His experience is that manual rotation in these cases is futile. He recommends very strongly in these cases the use of axis-traction forceps. When discussing faulty technic, he first calls attention to an error that is still too common, namely, the failure of employing what is indubitably the most efficient instrument, and makes a strong plea in favor of the axis-traction instrument, favoring its use in all cases and even for the low operation in order to protect the soft parts from extensive laceration. The second fault of the technic to which he directed attention, is the failure to apply the forceps to the biparietal diameter of the child's head wherever situated. As a marked exception to the rule of extracting with a pain, he refers to a group of cases not infrequently found in elderly primigravidæ, where every uterine pain, when the head is low, is accompanied by a spasmodic action of the muscles of the pelvic floor, and which for a time narrows the vulvar orifice and throws the perineum into a state of intense rigidity. In such a case the anæsthesia should be deepened and traction be carefully avoided save in the intervals between the pains.

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Edited by

BOARDMAN REED, M.D.

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PHILADELPHIA, OCTOBER, 1898.

Announcement.

The undersigned assumes editorial charge of the INTERNATIONAL MEDICAL MAGAZINE with the present number, and for a statement of plans refers to the article entitled "A New Departure." He begs the indulgence of readers for any shortcomings and bespeaks their continued coöperation.

Dr. Walter L. Pyle, the former able editor, has consented to retain charge of the department of Ophthalmology, and under the head of "Talks to General Practitioners," will furnish a series of short practical articles descriptive of the most recent methods in the diagnosis and treatment of the commoner eye troubles. BOARDMAN REED.

A New Departure.

It is proposed to enlarge the scope of the INTERNATIONAL MEDICAL MAGAZINE by adding a new feature which shall make it more of an organized and systematized teaching force for the very many physicians who realize that they are falling behind in much that is essential, or at least highly important, in the science and art of medicine and yet find it impracticable to attend polyclinics in the large cities. We have decided that it is possible to convey to them in their homes a large amount of post-graduate instruction, arranged and classified in an orderly, systematic manner so as to cover most of the ground and supply in large part their deficiencies.

We are conscious of certain difficulties inherent in this plan, and are only too sensible of the imperfections appearing in this first number of the journal in which an effort has been made to carry the idea into practice.

It must be at least one or two months more before we can hope to have our staff of collaborators fully completed and everything running smoothly.

Progress in medicine and surgery has gone on at such an extraordinarily rapid pace during the past twenty years, that no one now thinks of keeping up with all of it. Whatever they may aspire or attempt to do, very few physicians actually succeed in acquainting themselves with even one-tenth of the developments and improvements in all branches of our art. Specialism, therefore, has become an absolute necessity in medicine just as in the mechanic arts. While thus indispensable, it involves manifold and great inconveniences to general practitioners, for it is assumed that there must always continue to be family physicians, and in the country at least, these must cover to a certain extent the whole field of medicine and surgery.

Our idea then is to arrange for a series of short lectures or practical talks to general practitioners upon the most important subjects connected with each clinical specialty, in plain, nontechnical language and sufficiently elementary to be readily intelligible to all medical readers. For instance, in dermatology, Professor Van Harlingen has promised to discuss eczema, the syphilodermata, psoriasis, etc. In general surgery Dr. Leonard gives his initial "Talk" in this number, and will in future numbers describe the latest rules of leading surgeons as to asepsis, antisepsis, the diagnosis of the more important fractures, the commoner amputations, etc. In diseases of the digestive system the editor gives in the present issue directions on "How to Introduce a Tube into the Stomach with the Least Possible Embarrassment of the Patient." This he proposes following up with a short lecture on Washing out the Stomach, Methods of Determining the Boundaries of the Abdominal Organs, The Detection and Treatment of Loose and Floating Kidneys, The Various Kinds of Test Meals and Their Uses, The Simpler Tests of the Stomach Contents, etc. In Obstetrics, also, Dr. Benjamin has already begun the teaching work and furnishes a practical discussion of "Asepsis" in midwifery.

In some of the specialties there may be a "Talk" of this kind every month, in others, every two months only. The sole intention is to make them helpful and genuinely instructive to physicians who have not been able to keep up. There will be no attempt in them to report marvellous or extraordinary cases, or to describe rare or difficult operations which general practitioners ought not as a rule attempt. They will, on the contrary, deal chiefly with subjects often considered too trite or commonplace for publication in a medical journal.

Let it be clearly understood, however, that in adding this polyclinic

feature for the benefit of the general practitioners who are not in a position to avail themselves of adequate post-graduate instruction in other ways, we have no thought of lowering the standard of the journal in the slightest degree. On the contrary, it shall be our aim to make it take even higher rank than before as an exponent of all that is best in medical science.

To this end we shall welcome communications from all parts of the world, embodying the results of original researches, whether in the laboratory or in the wards of the hospital. We shall also promptly reproduce, either in abstract or *in extenso*, according to their importance, valuable communications that may be published in other journals, having them translated into English when they first appear in a foreign language. We shall keep in touch with our distinguished collaborators, both in this country and abroad, and seek suggestions from them regarding the attitude of the journal towards the various movements, fashions or fads which are continually asserting themselves in the busy field of medicine.

Besides thus striving to keep the INTERNATIONAL abreast of all that is best and most scientific in medical progress and adding the novel feature of teaching to general practitioners so much of the modern specialties as is possible in a medical journal, we desire also to encourage the older physicians to contribute their valuable experience in the treatment of disease, the "wrinkles" that they have discovered and the prescriptions, even though occasionally polypharmacal, that they have tried and not found wanting in a multitude of cases.

Contributions, then, short and practical, from physicians of experience will always be especially welcome. A great medical journal, unless it seeks support exclusively from physicians devoting themselves to some one department of medicine, should be broad and catholic in its management, and it shall be our earnest effort to realize such an ideal for the INTERNATIONAL MEDICAL MAGAZINE.

Ethical Questions.

As regards ethical questions, the INTERNATIONAL will have no sympathy with quackery or anything that savors of it; but we do not purpose wasting time and space in the discussion of mere medical politics. Recognizing medicine as the greatest of all sciences, having for its chief end the preparation of men for the practice of the grandest and most beneficent of all arts, we shall try to keep as much as possible to the essential, all-important task of augmenting and improving in every proper way the armory of weapons which are being used in the eternal combat with disease.

Tuberculosis in Philadelphia.

The total number of deaths each year from tuberculosis is gradually growing less in Philadelphia. Mortality statistics show that for the year 1892 the deaths per 1,000 persons living were 2.480, while in 1897 the rate was 1.966 per 1,000. This good result is attributed to the excellent work being done by the Pennsylvania Society for the Prevention of Tuberculosis. In 1892 a thorough investigation was made in order to find the infected houses and areas and to properly instruct those who were living in these zones. This work is highly commendable, and as soon as public opinion shall have reached the proper stage, it is probable that still greater good can be accomplished. It is proposed that a state sanitarium be built, so that tubercular cases may be properly treated and the spread of the disease still further limited.

The Treatment of Typhoid Fever.

The so-called eliminative treatment of typhoid fever has an able and vigorous defender in Dr. Thistle, of Toronto. He first advocated the giving of purgatives in this disease over five years ago and has championed the treatment ever since. A recent communication by him to the *Medical Record* answers the theoretical objections of his brilliant fellow-countryman, Professor Osler, and cites the statistics of the Toronto General Hospital, showing that from 1893 to 1897, a period of four years, 563 cases of typhoid fever were treated there mostly on the eliminative plan by the administration of calomel and salines, with a mortality of only 37, or 6.57 per cent. It is unfortunate for the interests of medical science that the controversy between the advocates of eliminants and antiseptics on the one hand, and of baths or expectancy, on the other, in the treatment of enteric fever, should have been clouded almost in the very beginning by a show of personal feeling and a fiery ardor which should have no place in a scientific discussion. One of the advocates of the former method, nettled doubtless by the sceptical manner in which his extraordinarily favorable statistics were received, made use at the meeting of the American Medical Association in Baltimore several years ago, of some intemperate expressions which were unjustifiable and scarcely excusable. But this by no means warrants a sweeping condemnation of the method.

Eliminants and antiseptics constitute quite as rational a means as any other of treating a fever which, in its severe forms, saturates the system with toxins, leaving always serious and long-lasting, when not fatal, results. In a question of this kind, the observations of competent men in a sufficiently large number of cases must finally decide. Meanwhile let us await

the verdict with unprejudiced minds. It is altogether probable that the particular combination of antiseptics and eliminants devised by Woodbridge may not prove to be the best for the purpose, and that yet a free use of water internally to flush the kidneys, with calomel and salines to promote the secretions of the liver and alimentary tract at the same time that they sweep out the accumulated bacilli and toxins along with what Thistle calls "the poison-laden bile," may do better in many cases, at least, than unlimited cold water on the outside. The reported mortality seems to be much the same—a very low one—by both methods, according to the claims of their most zealous adherents. In the hospitals the tubbing is quite as practicable as the medicinal plan, but it is noteworthy, that it is less unanimously advocated of late than a year or two ago by the most experienced clinicians.

In private practice, and especially in the homes of the poorer patients, where typhoid most abounds, it is difficult, when not quite impossible, to carry out the Brandt treatment by cold baths in a safe and efficient manner, and expectancy being a humiliating confession of powerlessness in our boasted art, the eliminative method—whether with or without the help of antiseptics—certainly would seem entitled to a fair and unbiased trial on a larger scale than it has yet had, and under such careful conditions as would place the results beyond dispute.

The probabilities are that the bath treatment variously modified to suit the different reactive powers of different patients, will long continue to be the favorite one in hospitals where the necessary appliances and skilled attendance are always at hand; and it seems quite as likely that in the country districts and in private practice generally, some other method, including possibly a careful employment of eliminants, may prove an effective substitute. Let us hope at least that there will never be a return to any drugs approaching in their action the antipyretics of coal tar derivation.

An Appeal from the Red Cross Society.

In accordance with a special request we gladly publish the following as conspicuously as possible: "The Associate Society of the Red Cross of Philadelphia is maintaining its hospital at Camp Meade. Patients too ill to be moved to city hospitals are taken there. Its capacity to receive all these cases is inadequate because of the Society's inability to secure experienced women nurses for the nominal sum of sixteen dollars per month. Nurses willing to make the sacrifice and to engage in this laudable work will kindly apply by letter or report to 'The Committee on Nurses,' 1501 Chestnut street, Phil-

adelphia. Funds are needed to meet the increasing demands made upon the Society (Executive Committee)."

The trained nurses of Philadelphia are as patriotic and self-sacrificing as those of any community and there will surely be no lack of responses to the above appeal.

The Treatment of Constipation.

While in Germany last summer we had the pleasure of meeting Professor Von Noorden, of Frankfort, and Dr. Hans Leber, of Bad Homburg. Both are authorities in digestive disorders and have well-equipped private sanitariums in which they have chronic invalids treated under their immediate personal supervision. Both of these distinguished physicians have promised papers on constipation for publication in an early number of the INTERNATIONAL.

BOOK-REVIEWS.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS: With especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. de Schweinitz, Edward Martin and Barton C. Hirst. New (seventh) edition. In one octavo volume of 770 pages, illustrated. Cloth, $3.75; leather, $4.50, net. Lea Brothers & Co., Philadelphia and New York.

Professor Hare, with his usual thoroughness, has kept his Therapeutics well up to date. It is quite as fully abreast of the times as any book on the subject with which we are acquainted. The sixth edition was so completely revised that comparatively few changes or additions were found necessary in the seventh. For a single-volume work on the subject and of moderate size and cost, it is remarkably full and satisfactory. We would suggest, however, to the author that the article on hydrochloric acid might in future editions be slightly amplified with great advantage. The range of dose—five to ten drops of the dilute acid—is not sufficiently large for numerous cases of achylia gastrica. Twenty to forty drops, if dissolved in a full glass of water and slowly sipped after meals, may often be taken with advantage in such cases. Then the recently discovered characteristic of this remedy of stimulating and restoring the function of the gastric glands when depressed from certain causes, is worthy of being noted.

AN AMERICAN TEXT-BOOK OF GYNECOLOGY. By American Authors. Edited by J. M. Baldy, M.D. Second Edition. Philadelphia, W. B. Saunders. 1898. Price, $6.00, cloth; $7.00, sheep or half morocco. For sale by subscription.

This well-known book is considerably improved in its revised form. Much new matter has been added and some of the old eliminated, modified, or rearranged. More than forty of the old illustrations have been replaced by new ones; and they picture methods, not specimens. The book now contains 341

illustrations in the text and 38 colored and half-tone plates. The chapters on bladder, urethra and ureters has been extensively altered ; the portions devoted to plastic work are practically new. Nearly all the matter relative to operative technic has been revised and improved. A book numbering among its contributors Goodell, Kelly, Byford, Craigin, Etheridge, Krug, Montgomery, Pryor Tuttle and Baldy, needs no further recommendation to gynecologists.

An American Text-Book of the Diseases of Children. By American Teachers. Edited by Louis Starr, M.D., assisted by Thompson S. Westcott, M.D. Second Edition, revised. 1898. W. B. Saunders, Philadelphia. Price, $7.00 cloth ; $8.00 sheep or half morocco. For sale by subscription.

This volume is fully fifty pages larger than that of the first edition. The rapid advances in the field of pediatrics have made necessary many changes and several additions. The new articles include "Modified Milk and Percentage Milk Mixtures," "Lithæmia," and a section on "Orthopedics." Those chapters showing extensive revision are "Typhoid Fever," "Rubella," "Chicken-Pox," "Tuberculous Meningitis," "Hydrocephalus," "Scurvy," "Diphtheria," "Cretinism," and "Infant Feeding."

A particular feature of this work is the admirable manner in which the work of so many distinguished authors, working independently, has been rounded out and amended into a perfect treatise, probably the best of its size on the subject. Few noted American names are omitted from its list of authors. The book is handsomely illustrated and well indexed.

A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, M.D., LL.D., etc. Vol. VI. Price, cloth, $5.00. The Macmillan Co., London and New York.

This volume concludes the subject of diseases of the respiratory organs and the pleura and begins the subject of diseases of the circulatory system. It is an important volume, dealing with diseases of the first magnitude, such as pneumonia, pleurisy, phthisis and affections of the heart. There are eighty illustrations for articles by twenty-nine contributors, whose names are household words in medical circles the world over.

The articles on bronchitis and bronchiectasis are by Dr. William Ewart. Pneumonia has been allotted to Dr. P. H. Pye-Smith, who writes in an interesting style. The author expresses the wish that the historical name pneumonia might be restricted to the acute disease with lobar hepatization, and the other inflammatory affections of the lung be named pulmonary catarrh, pulmonary abscesses and cirrhosis of the lung. The author discusses the successive historic steps in the bacteriology of pneumonia. He says of the pneumococcus described by Fraenkel, Talamon and Sternberg that, while it fails to fulfil the three tests of a pathogenetic organism, it is "probable that it plays an important part in the natural history of pneumonia." The status of the pneumococcus is, therefore, not held to be firmly established in reference to this disease. Dr. Pye-Smith says that it is clear that no means known at present can cut short pneumonia. The author holds that there is nothing absurd, however, in supposing that this may one day be done. He mentions favorably the doctrine of immunity in this connection. Venesection is given its proper place in the therapy of this disease.

The article on phthisis, by Dr. Percy Kidd, is fully abreast of the times. One correction might be made, and that is with reference to the prevalence of phthisis in Iceland. Dr. Kidd quotes the mortality as low, but this is no longer

the case. About five years ago a number of cases were imported from Denmark, and the cases of phthisis in Iceland have doubled each year, so that the disease is now making rapid strides, as might be expected in that unfavorable climate. Dr. Kidd very properly does not lay much stress on direct inheritance as a cause. He makes no mention of the use of the X-ray in the diagnosis of tuberculosis of the lungs. This must be recognized as a valuable aid in making an early diagnosis. By the valuable labors of Dr. F. H. Williams, of Boston, and other American investigators this additional means of diagnosis is being rapidly placed on a firm foundation.

Dr. James F. Goodhart contributes an interesting article on asthma and hay-fever. The article on pleurisy is by Drs. Samuel Gee and W. P. Herringham and is based on sound principles.

Useful chapters on the general features of the blood and its clinical examination and cardiac physics introduce the second portion of the volume. The editor is at home in this field and contributes valuable articles on chlorosis and on functional disorders and mechanical strain of the heart, also an article on disease of the aortic area of the heart. Professor Allbutt writes in a free, interesting, vigorous style. Of the term "bradycardia" he says: "It connotes nothing. In literature a little pedantry may be harmless, nay, as a protest against slovenliness may have occasionally its welcome side; in science it is a pest. . . . . The word is but wind."

Professor Allbutt draws a vivid picture of angina with its trying features. His advice is sound: "Give your prognosis on the best suppositions, treat your patient on the worst."

Professor Allbutt states that syncope without any organic disease may be fatal and that such cases are not extremely rare; faints due to agonizing pain are more likely to be fatal than those arising from sudden displacements of blood pressure. The inhibitory effect of intense pain may, it would seem, arrest the heart through the vagus to a degree incompatible with life. Death in angina pectoris is due to this reflex effect of pain; the pain, in the author's opinion, having its seat in the aorta.

Professor Allbutt also contributes an interesting article on mechanical strain of the heart, but when he deals with the field of sports he evidently misapprehends their relative force. In discussing youthful exercises he says. "There is now a sort of natural selection, the weaklier taking to girls' games, such as lawn tennis, hockey, cycling and the like." We confess to some surprise and wish that in a footnote, at least, the author had given us a list of what he considers manly sports.

It is impossible to do justice to a large volume, by many writers, in the space allowed for review; but the volume last issued amply fulfils the expectation we had at the start that the system under examination proves to be the standard system of medicine of the present day.

G. H.

PERSONAL.

Dr. Howard A. Kelly is highly complimented in a review of his work on Operative Gynæcology in a late number of the *Lancet*. The reviewer speaks of it as "undoubtedly the most important work on this subject, which has yet been written in the English language." He

says: "The two volumes comprising it will long remain the standard work upon the subject of which they treat, and should be in the hands of all gynæcologists and surgeons performing pelvic operations."

Miss Dorothy Phinney, who, it is said, was the first woman to lose her life in hospital service in the war, was a nurse in Kings County Hospital, Brooklyn.

It is said that Dr. Emil Dippell, chief resident surgeon at St. Timothy's Hospital, Philadelphia, is suffering from multiple abscesses, the result of infection occurring while assisting in an operation several weeks ago.

Dr. E. O. Shakespeare, of Philadelphia, has been appointed by the war department on the army board of sanitation. Dr. Shakespeare was doubtless chosen because of his extensive experience in dealing with sanitary conditions, he having served before on similar commissions. In 1884 the State of Pennsylvania sent him to Plymouth to investigate the epidemic of typhoid fever, at that place. In 1885 President Cleveland appointed him a commissioner to India to investigate the cholera epidemic. In 1892 he was port physician of Philadelphia during the cholera scare, and the absence of the disease at this place shows his capability. In 1894 he was the representative of this country to the Paris conference to consider means to regulate the navigation of the Persian Gulf and Red Sea and to prevent the transmission of cholera from India toward the West.

A pension of $500 a year has been awarded by the Russian branch of the Red Cross to Mr. Henri Durant, the founder of the Society, who is now in straitened circumstances.

By the will of the late Harriet B. Evans, $5,000 is bequeathed to the Presbyterian Hospital, Philadelphia, for the founding of a free bed in memory of the deceased's husband.

Dr. Edward C. Miller has been given full charge of the didactic and practical laboratory teaching in anatomy in the Northwestern University Medical College, Chicago, with the title of professor.

Dr. Abraham M. Owen, of Evansville, Ind., a leading physician and surgeon of that place, is dead of heart disease. Dr. Owen was a native of Madisonville, Ky., and was forty-nine years old. He was one of the organizers and one of the first officers of the Pan-American Medical Association.

Dr. Wm. Osler is the Dean-elect of Johns Hopkins Medical School in place of Dr. William H. Welch.

Dr. Anita Newcomb McGee, wife of Professor W. J. McGee, of Washington, D. C., and daughter of Professor Simon Newcomb, formerly

of the Naval Observatory, was regularly sworn in, on August 29, 1898, as an Acting Assistant Surgeon, United States Army. This is said to be the first woman, in the history of the American Army, ever appointed a member of the army medical staff. Her commission entitles her to the uniform of a second lieutenant, without designation of rank. Throughout the Spanish-American war, Dr. McGee has been in charge of the selection of the women nurses, and of the 700 or more now in the field, most of them have passed muster at her hands. She has gone to New York to select thirty graduate nurses for service in Porto Rico.

Dr. W. F. McNairy, of the Navy Department, died recently at Washington after a short illness. He was a graduate of the University of Pennsylvania and was eighty-five years old.

According to a report in the *Sun*, while Surgeon-General Sternberg was riding along the beach at Hillsborough Bay, one evening recently, his horse stumbled and fell into the water, carrying the rider with him. The Surgeon-General could not withdraw his feet from the stirrups, and might have been drowned or trampled to death had it not been for the prompt assistance of Private Bronk, of the New York Volunteers, who jumped into the water and disentangled the officer.

Madame Pean has presented the valuable collection of anatomical and pathological casts to the Hospital Saint-Lours, in Paris.

Professor George Ebers, who died on August 7th, at Starnbergersee in Bavaria, was sixty-two years of age. Although best known as a writer of romances, he will be remembered as the discoverer of the famous medical papyrus which bears his name. He made the discovery in Thebes during his second visit to Egypt in 1872.

Dr. S. Weir Mitchell has been spending the summer at Bar Harbor, Maine.

Sir Thomas Smith, who lately resigned his post as professor of surgery to St. Bartholomew's Hospital, will deliver the inaugural address at the next session of the Abernethian Society. Sir Thomas has chosen for his subject, "Reminiscences of his Forty-eight Years' Association with St. Bartholomew's Hospital."

The death has been reported of Professor Nasse, the Berlin surgeon, whilst mountaineering near Pontresina.

Professor Koch has been recently engaged in the study of malaria in the hospitals of Milan, and expects to make a special investigation of the subject in Italy.

M. Pilliet has been appointed Director of the Musée Dupuytren, which contains the anatomical collections of the medical faculty at Paris.

Miss Bonomi is said to be the first woman to receive the degree of M.D. from an Italian university. It was conferred upon her recently by the University of Genoa.

Dr. George W. Lindheim, a young surgeon of the Red Cross Society, died on September 16th at his home, in New York, of typhoid fever contracted in the army service.

Dr. Henry P. Bowditch, of the Harvard Medical School, has received the degree of LL.D. from Edinburgh and that of Doctor of Science from the University of Cambridge, England.

PRACTICAL NOTES.

For Irritable Bladder. In the *Louisville Medical Monthly* for August the following is recommended:

℞. Salve,
Tincture of hyoscyamus, āā ℥ij.
Infusion of buchu, q. s. ℥vj.

Orexin as a Stomachic. Dr. Frederick Kolbl, has obtained good results from the use of this drug in chlorosis and anæmia, in anorexia of convalescents after severe illness, in nervous dyspepsia hysteria, and neurasthenia. It may be given with good results in the diminishing appetite found in early and chronically developing pulmonary tuberculosis, in slight cases of gastric catarrh, in anorexia accompanying valvular diseases of the heart, and chronic myocarditis. In every case of vomiting in pregnancy this symptom was relieved in a few days. It is contra-indicated in all cases of inflammation and ulceration of the mucous membrane, and in all cases of hyperacidity and excessive gastric secretion. The dose is from one and one-half to three increased to seven grains daily, in a little cold water. The best time is about one hour before the chief meals—*e. g.*, dinner and supper—and it should not be followed by a large quantity of warm liquid. The best form is in pill, each containing the minimum dose above given.—*The Therapist*, 1898.

MEDICAL NEWS AND MISCELLANY.

In difficult diagnoses between measles and scarlet fever, Dr. Donskin points to the fact that the region of the nose is always occupied by eruption in measles and the lips peel in scarlet fever.

The tenth annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee will be held at Birmingham, Ala., Tuesday, Wednesday and Thursday, October 25, 26 and 27, 1898. Frank Trister Smith, M.D., Secretary.

Brandis (*Deutsch Med. Woch.*) has collected ten cases of syphilis in physicians, all infected professionally in the fingers, and all extremely violent cases, only yielding to prolonged and repeated treatment. The diagnosis was made very late in each case.

A Midwife Institute is to be erected at St. Petersburg on an enormous scale, to cost nearly two million roubles, the present small institution for the purpose having been found inadequate.

President McKinley has decided that homœopathic graduates shall be eligible to appointment in the army and navy, provided they can pass the official examination, which is very rigid, but has little to do with therapeutics.

The second International Congress of Experimental Hypnotism is to meet at Paris in August, 1900, immediately after the International Medical Congress. It is already well under way, with Dumontpallier, President, and Berillon, Secretary General.

The results of the Examination Recently held by the State Board of Medical Examiners of Pennsylvania.—The following report of the results of the examination recently held by the State Board of Medical Examiners of Pennsylvania has just been published:

	No. Exam.	No. Rej'd.	No. Rej'd.	Gen. Average.
University of Pennsylvania	93	1	01.0	83.63
Medico-Chirurgical, Philadelphia ..	76	8	10.5	78.84
Woman's Medical, Philadelphia ...	26	1	03.9	78.68
Baltimore Medical College	25	6	24.0	76.71
Physicians and Surgeons, Baltimore,	2	1	50.0	76.71
Jefferson Medical College	20	5	25.0	74.73
Western Pennsylvania.....	21	8	38.1	72.39
Miscellaneous.....	53	17	32.1	75.61
Total 316		47	14.9	78.77

Blockley Hospital, Philadelphia, will soon be enlarged.

W. H. Noble, of Philadelphia, is reported by the *N. Y. Medical Journal* to have performed on a mulatto, 46 years old, gastrectomy for carcinoma involving the greater curvature of the stomach. While the gastrosplenic omentum was being tied off the patient collapsed and expired. This makes at least the third fatal gastrectomy and there have also been three successful ones within less than a year—one by Schlatter, of Zurich; one by Bingham, of San Francisco; and the last by Richardson, of Boston.

In the first number of the *Journal of Tropical Medicine*, a new monthly published in London, devoted to medical, surgical and gynecological work in the tropics, and edited by James Cantlie, M.B., F.R.C.S., together with W. J. Simpson, M.D., M.R.C.P., appears the announcement that a school for the study of tropical diseases is to be established in London. This school is to be attached to the Branch Seamen's Hospital at Greenwich, which is to be enlarged for the purpose. The school is to be under the direction of Dr. Patrick Manson, President of the Section on Tropical Diseases at the recent Edinburgh meeting of the British Medical Association, and an abundant supply of material for study is assured, as the cases treated at the hospital are natives of India, Africa, China, the West Indies and other tropical countries brought from the vessels lying at the London docks. The school will require a two months' course of demonstrations and clinical work.

Another illegal practitioner has been convicted. Mrs. A. R. Crayton, of San Francisco, pleaded guilty to the charge of practicing without a license and was fined $50 by Judge Allen, of Oakland, on August 5th.

Of the nearly 2,500 physicians in Paris, says the *Pacific Medical Journal*, five or six make from $40,000 to $50,000 a year; ten to fifteen make from $20,000 to $30,000; a hundred make $3,000 to $5,000; eight hundred make from $1,500 to $3,000, while twelve hundred make less than $1,500.

Sansom found the average age of death in cases of mitral stenosis, (in 61 cases) to be 32.7 years. Hayden, in 42 cases, gave 37.8 years. Broadbent in 53 cases gives the average as 33 years for males, and 37 to 38 years for females. Samways, studying the post-mortem records at Guy's hospital, London, for ten years shows that the average age at death, males and females together was 38⅓ years.—*Clinical Review.*

Rare Cause of Death in Diphtheria. Flesh (*Wiener klinische Wochenschrift*, 1898; *Gazette Hebdomadaire de Médecine et de Chirurgie*, August 7) has reported a case of diphtheria in which death was due to multiple embolism of the lungs. The starting was a thrombus of

the jugular vein due to the presence of an ulceration in the throat. Before death the child showed œdema of the submaxillary region.—*New York Medical Journal*, September 3, 1898.

Southern Illinois Medical Association. The next semi-annual meeting of the Southern Illinois Medical Association will take place at Cairo, on Thursday and Friday, November 17 and 18, 1898.

It has been rumored, and published in the weekly medical journals, that the faculty of the Department of Medicine of the University of Pennsylvania, have recommended to the Board of Trustees, Dr. James Tyson, Professor of Clinical Medicine, to be given full and general direction of the branch of Theory and Practice of Medicine, and Dr. John H. Musser, Assistant Professor of Clinical Medicine, Dr. Alfred Stengel, Dr. M. Howard Fussia, and Dr. Frederick A. Packard, instructors in Clinical Medicine, are to be appointed to deliver, under Professor Tyson's supervision, the didactic lectures pertaining to that subject. On account of the illness of Dr. John Ashhurst, John Rhea Barton Professor of Surgery and Professor of Clinical Surgery, it was decided to recommend that general supervision of surgical instruction be given to Dr. J. William White, Professor of Clinical Surgery, and that the didactic lectures in this branch be given to several of the junior members of the teaching staff.

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LECTURE.

THERAPEUTIC ASPECT OF CIRCULATORY DISTURBANCES.[1]

THOMAS CLIFFORD ALLBUTT, M.D.,
Professor of Medicine in Cambridge University, England.

It is the common experience of every professor of medicine to have students who are leaving college come to him and say, "you have given us no body of prescriptions to use in our practice." This used to be the method, but we do not follow it any more. Then the diseases were written in one column and prescriptions containing six, eight or ten ingredients in the other column. Really, therapeutics is a small matter and easily disposed of, if you once make the diagnosis of the disease. Diagnosis is the great thing. In fact, therapeutics is only diagnosis. After this is made the rest is easy. In fact, you may not use drugs at all when once you know what ails your man. You may prescribe gymnastics, massage, air, water, electricity. You set part of the forces of nature at work repairing another part. There are two points in diagnosis. In the first place it is not sufficient to say, this man has disease of the heart. You must say what that disease is. It is a lesion of the mitral valve. But that will not do. You must know the extent of that lesion. Then you must know how that heart has compensated for the lesion, how much of it has hypertrophied. In the second place you must make the diagnosis, or prognosis, that the man is *going to have* a mitral lesion, and prevent it. Study processes and combat them. Do not wait to make the diagnosis until the final stage begins which will lead to an incurable disease. You should know every detail as to how organs are doing their work. See just how the liver, the kidneys, the lungs are doing. Modern therapeutics simply means prevention. There are no specifics for diseases any more—the disease cures itself.

[1] A clinical lecture delivered at Jefferson Medical College, October 21, 1898.

Quinine was once a specific for malaria. Now it is known that it acts on the *cause* of malaria. Stop the cause and the disease stops. Preventive medicine again. Study causes. Don't pour drugs of which you know little into a patient about whom you know nothing.

I have been asked to speak about therapeutics as related to diseases of the arterial system. Now diseases of arteries take their root in some processes, or as a result of certain conditions about which we know exceedingly little. Natural wear and tear probably have a great deal to do with it. We do not find disease of the arteries in the young. Atheroma is a disease coming on after fifty years of age. If you have a patient past this age, consider that somewhere in his arterial system he probably has some degree of atheromatous change. Provide for this by regulating his diet, degree of exertion, habits of life, etc. If the change is there, you have taken a very needful precaution. If it is not there, the increased care he takes of himself is a good thing anyway. There is often a limited area of atheromatous change. It may be only in the peripheral vessels. It may be in the aorta when not elsewhere in the body. It may affect only the cerebral arteries. The care and treatment is not the same for all these locations. If in the coronary arteries it is a matter of heart disease and calls for digitalis. Examine the radial, then the brachial. Look at the episternal notch for a raised and dilated aorta. The radial may be normal and tell nothing of disease elsewhere. Thus the diagnosis, again, must not be only of disease, but of the location of that process. Investigate every artery in the body. Disease of the arteries of the brain does not lead to apoplexy unless there be increased arterial pressure. If in a man of sixty or seventy years there be arterial sclerosis of the cerebral arteries, when the blood pressure rises, there are apt to be formed miliary aneurisms, and these give rise to attacks of apoplexy.

What are the causes of increased blood pressure? Mere arterial sclerosis does not cause it. Muscular contraction is not sufficient, because that is a constant factor in the body. This rise of pressure is usually caused by some toxin in the blood. This is using toxin in its widest sense—some poison in the blood. How some of these poisons originate and how they act, we don't know. When Bright's disease raises blood pressure we don't know why, only there is some poison at work. Lately, when in Japan, I had the opportunity of examining a case of Beri-Beri, the first I had ever seen. There was greatly increased arterial pressure. An autopsy of a person dead from this disease showed an hypertrophied left ventricle. The increased pressure had been compensated for by the ventricle. We see it in lead poisoning, in syphilis (an attack of syphilis generally affects the arterial system for life) and in gout. There are two diseases called gout. First is the articular variety, podagra. There is no increase of blood pressure in this. The second is the variety known as suppressed gout. This is not gout in the extremities; it is suppressed, and will not show itself. The physician would do anything to get it out. But in this there is a rise of

blood pressure. The toxin causing it is unknown. So these diseases must be treated differently. Now from all this we see that if the arteries are diseased we must find out where the disease is. If blood pressure is raised, we must find out what raises it. It is an easy matter to reduce pressure if the cause is determined. Diet, drugs, etc., will accomplish this. It must be taken in time. A doctor ought to know when increased pressure begins. Atheroma is the result of this condition lasting for years. Thrombosis may follow. All this should have been stopped by the doctor in the beginning.

Diagnoses are not commonly made; that is, thorough ones. If they were, therapeutics would be easier. There are many things to consider. My assistants are now studying the increased density of the blood in apoplexy and its relation to the increased pressure which accompanies this disease. This is a new field of investigation, but promises good results. Possibly the rise of pressure is due to the increased density. If this proves to be a cause the treatment is clear. When the pressure is rising, determine the density. If it is great, reduce it. Cut off nitrogenous food, give bulky vegetables, plenty of water on an empty stomach, massage, etc. In this way help to get rid of waste matter and katabolic material. Act upon the liver, and see that excretion in all ways is increased. When your patient has arterial sclerosis, but no increase of pressure, do not be afraid of apoplexy but of heart failure. This does not demand the lowering treatment as the others do. This is a case for digitalis. When the heart is strong and pressure high I would not hesitate to bleed the patient. Not so in this condition.

So we see that therapeutics is physiology. It is pathology. It is not writing a prescription for a certain disease. First-class therapeutics is studying and combating diseased processes. It is preventive. But if you cannot take a first-class course in dealing with disease, do the next best you can. Do something. If you cannot locate processes or diagnose causes and cure them, take a second-class course and give what has been customary. It may do good. You must do something for your patient, and the mere taking of medicine has in it a great element of suggestion for most people.

ORIGINAL PAPERS.

THE HOMBURG TREATMENT OF CHRONIC CONSTIPATION.

BY HANS LEBER,
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Conformably to the peculiar constitution of the water in the mineral springs at Homburg in regard to their chemically active ingredients, it is, besides diseases of tissue metabolism (such as obesity, diabetes, gout, etc.), disorders of the respiratory and vascular organs, ailments of women, etc., especially diseases of the digestive tract that are treated there with the greatest success. Among these last, again, habitual constipation, an ailment from which a considerable proportion of our patients suffer, is treated in large part by the waters of the cold salt springs. There are probably but few cases of habitual constipation, however, in which the mineral waters alone suffice to effect the desired result, and for their successful treatment, as a rule, we must call in such other helps as diet, massage, electricity and hydrotherapy, either singly or in carefully selected combinations.

The most common cause of chronic constipation is a diminution of intestinal peristalsis from atony and atrophy of the muscles of the bowel following chronic catarrhs of the intestines, cachexias, long-continued illnesses and lack of physical exercise, by disturbances of innervation in diseases of the spinal cord, psycho-neurotic affections (hysteria, hypochondria, melancholia), or scanty secretion of the digestive juices, especially the bile. Further causes are: Increase of the consistency of the fæces through increased loss of water, different drugs, of which some directly paralyze motility (opium, morphine), others restrict the secretion of the intestinal mucous membrane and constrict its blood vessels, such as alum, tannic acid, lead, bismuth, sulphate of copper, etc.; injudicious habits, as for instance irregularity in meals and defecation, frequent intentional repression of the desire to defecate, food lacking in residue, confining clothing (corsets), etc.

The symptoms and sequelæ of habitual constipation are as varied as the causes: Sense of fullness, discomfort, pressure in the abdomen, eructations, flatus, congestions of the head, loss of weight, anorexia, reflex neuroses, dyspnœa, and cardiac discomfort, nausea, mental depression, distaste for work, lack of energy, etc.

As a rule we do not receive in Homburg the most recent cases of constipation for treatment, cases which can be cured by suitably regulated diet and one or two active purges. Usually the disease has existed for months or years and has been treated in vain by the patient with the most varied internal and external means.

Enemas of water are considered especially harmless. But useful as these enemas may be when employed occasionally, they become injurious when used daily for months or years, as I have frequently found. It is quite natural that the pouring in of a half or whole liter of water into a viscus already weakened through atony should reduce its power of contraction still further. According to my experience (and I can cite several hundred cases of constipation, some of them obstinate) a patient who has used internal medications for years, is more easily restored to health than one who for but a year has used daily or frequent enemas.

In the treatment of constipation, their removal from home and business activity and the possibility of devoting themselves for several weeks exclusively to the restoration of their health, constitutes an especially important factor that my patients particularly enjoy.

The customs and rules followed in the treatment of constipation, of course with individual modifications, in Homburg and especially in my institution, are in general these: Immediately upon rising the patient drinks one or even two glasses of water of 275 cc. each, from one of the local salt springs. (Elisabeth, Ludwigs or Kaiser-Brunnen.) Fifteen to twenty minutes is allowed to elapse between the two glasses. The Elisabeth-Brunnen is most frequently chosen on account of its richness in solid constituents (13.987 parts to the 1000, of which 9.86 are sodium chloride). The water of the local springs, as already stated, is cold, having a temperature of from 10°.6 to 11°.9 C. (51° to 53° F.). It is at this temperature that they are taken and produce their best effects, but it not seldom occurs that I am compelled to permit sensitive persons to warm slightly at least their first glass. As a rule two glasses of the spring suffice at first; if not, a third glass is taken after a pause of fifteen to twenty minutes after the second. More than three glasses, I, for my part, never prescribe and if the action is not satisfactory, I have the first glass strengthened by the addition of a teaspoonful of Homburg salt. (Obtained by evaporation of the Elisabeth spring water.)

The action of the water shows itself rather promptly, before or immediately after the first breakfast, which is taken half an hour to an hour after the last glass, and terminates after one, two or three movements, for the entire day. If the strength of the patient permits, I have the abdominal massage follow the last glass as soon as possible, that is before the first breakfast; or if this is not convenient, an hour after it. In order to obtain a lasting effect after the course at the springs in those cases where the constipation is due to an atrophy or atony of the intestinal muscles, the treatment of the relaxed bowel by means of massage is indispensable.

Before taking up the technique of abdominal massage I must not omit to call repeated attention to the fact that the latter should only be carried out by the physician himself. The abdomen with its widely distributed circulatory and nervous systems is, especially in the state of disease, a far too complicated and sensitive region to be belabored by lay hands. To

this it may be added, that in very many cases the atony does not extend over the entire colon, that, furthermore, even in a colon dilated from atony, the state of fæcal stagnation is a daily varying one and consequently those places must be massered with especial care and thoroughness. If, added to this, we have a floating kidney or old perityphlitic adhesions, or in women, diseases of the pelvic organs, how shall a layman do justice to these particular conditions?

The physiological effect that we expect of abdominal massage is to put the intestines in a position to perform their functions both in respect to the elaboration and absorption of the ingested food and the carrying onward of the waste products. This result we obtain by strengthening the intestinal muscles, stimulating peristalsis, increasing the blood supply, reducing the chronic inflammatory condition of the intestinal mucous membrane and removing the adherent tough coating of mucus.

All the manipulations of abdominal massage must have this sole purpose, and others which simply aim at the transportation of the contents mechanically or perhaps forcing them toward the anus are useless. If it were the aim of abdominal massage to effect an immediate evacuation, we have in our therapeutics many more pleasant and reliable means and it would be no more than a cathartic, like many others, the effect of which ends with its last employment. And yet the majority of masseurs (both lay and professional) always perform massage in such a way that their main work is making circular kneadings in the direction of the course of the colon with the admitted intention of mechanically transporting onward the intestinal contents. This error is also found in many of the directions for learning abdominal massage. If in the following I make an attempt to describe the massage of the abdomen as practiced by me, I am yet well aware of the difficulty of a comprehensive elucidation as well as of the fact that the best description and the closest study of the same can never replace a *demonstratio ad oculos*. Massage can be properly learned and judged not from books, but only by instruction on the human being, personal practice on the sick and, if possible, on one's own body, well or diseased. For the performance of abdominal massage the patient lies with the upper portion of the body slightly elevated on a narrow, firmly upholstered bench with a roller of about 15 to 20 cm. in diameter under the knees, the arms lying lightly at the side of the trunk, the mouth open.

The patient must be entirely comfortable and in no forced position and should breathe quietly and regularly. The masseur stands at the left side of the patient. The anointing of the surface is not only unnecessary but entirely unsuitable, since in certain manipulations, such as frictions and shakings (erschütterung), the points of the fingers slip on the greased skin over the parts of the body to be treated without efficiently exercising them. Besides, by dry massage one can also treat the most hairy abdomen without producing discomfort, which would not be lacking if the abdomen had been anointed, since the pulling on the greased hairs easily causes an in-

flammation of the hair follicles. At the beginning of the massage the operator encircles the right side of the patient alternately with both hands and strokes the right hypochondrium from as far backwards as possible forward and to the left to beyond the middle line with a gentle but gradually increasing pressure. These strokings reach upwards to the upper border of the liver. Each succeeding one is carried two or three cm. lower down, while the lower border of the ribs and even the liver are compressed as firmly as possible. In the region of the upper edge of the pelvis the strokings are carried out, always as far as possible, from behind forward across the middle line below the umbilicus. Altogether about twenty or thirty strokings are given.

Now the two hands are laid alongside one another in such a manner that the tips of the two middle fingers touch and the index fingers are crossed on the volar surface of the hand. The tips of both middle and ring fingers should form a straight line. In this position of the hands the finger tips are pressed into the ileo-cœcal region and rapid and short frictions made vertically to the direction of the colon over that part of the same that is under the finger tips, combining them after a little experience with a slight push inwards. The finger tips remain on the part of the abdominal wall where they happen to be and with them rub the underlying portion of colon. After this has been done for about one-quarter to one-half minute, the fingers are raised completely and pressed down again slowly immediately alongside, and the entire colon ascendens and tranversus to the middle line is treated in this fashion, always vertically to the direction of its length. The entire proceeding is repeated two or three times. Before passing on to the actual kneading of the stomach, the strokings are repeated as above, say ten or twenty times. The kneading is done with the hands alternately alongside and above one another.

In the first place the hands are so laid alongside each other that the radial sides touch. The left thumb lies on the back of the right hand, the right thumb in the volar surface of the left hand, or the reverse. One begins, as in the strokings, in the right hypochondrium, in this manner; The part to be kneaded is pressed toward one by the finger tips and away again by the heel of the hand, the finger tips constantly advancing toward the middle line, while the kneading is beyond this to the left hypochondrium. In kneading with superimposed hands the ulnar edge of the hand is, advancing as before, pressed in, then the tips of the fingers, the radial edge and finally the heel of the hand. In the middle line and especially in the region of the pylorus the pressure in kneading must be reduced somewhat as everyone is more or less sensitive to pressure at this point. A further method is to make small, rapid, circular rubbings of the colon, beginning at the cæcum and also continued to the middle line. They are done with the separated (second, third and fourth) fingers of the right hand, while the opposite side is pressed toward the operating hand with the other. The circular frictions must be done very rapidly with

slight concussions. In conclusion the hands are laid alongside of one another, pressed into the colon directly over the symphysis, and a rapidly interrupted trembling or jarring motion is made over every attainable portion of the colon descendens and transversus.

Some strokings, as at the beginning, terminate the massage of this side. The masseur then steps to the right side of the patient and treats the left half of the abdomen in the same manner. The stomach, in so far as it is not covered by the ribs, is now massered in the same manner as the colon. The conclusion of every abdominal massage treatment consists of the two following procedures: One hand is flatly placed on each half of the abdomen and the two hands press the contents of the abdomen alternately towards one another. In a large and lax abdomen this is equivalent to literally tossing it to and fro. Finally one encircles the entire abdomen so that the hands of the masseur almost touch in the lumbar region of the patient, and shakes him up and down several times, repeating this procedure perhaps thrice. The entire massage of the abdomen should last fifteen to twenty minutes.

Undoubtedly the most important effect of abdominal massage is the irritation to which the unstriped muscular fibers of the digestive tract are subjected. These, as well as the external muscles, contract as the result of the different massage manipulations (tapotement, for instance), and in so doing daily gain in strength. It is highly probable that abdominal massage exercises a very powerful effect on the glands connected with the intestinal tract, as well on their epithelium as on their nerves. Especially at the beginning of massage of the large intestine there are passed at each defecation large masses of mucus due to rapid destruction and mucoid change of the epithelium. A chemical effect of abdominal massage is not improbable; for instance, an accumulation of CO_2 in the intestinal veins, the result of the venous hyperæmia of the peritoneum produced by the massage. This also is known to stimulate peristalsis. In nearly all cases the appetite is markedly improved. As abdominal massage considerably raises the blood pressure, it must not be employed in recent hemorrhage of the brain, the lungs or the stomach, in well-developed aneurisms, or in any case where the danger of hemorrhage from rupture of a blood vessel threatens. Further contraindications are pregnancy, ovarian cysts, or neoplasms in the abdomen, hydronephrosis, hemorrhage in the urinary tract, renal colic, acute inflammations, incarcerated hernia and ulcerative processes of the digestive tract, especially gastric ulcer. On the contrary, abdominal massage may be practiced in simple hernia, gallstones, and floating kidney; always, of course, with a careful consideration of the condition. Such a course of massage lasts four to six weeks, except in rare cases where the object is attained in three weeks and in certain others that may require two or three months of treatment.

(To be Continued.)

PURULENT CEREBRO-SPINAL MENINGITIS; PRESENCE OF THE BACILLUS COLI COMMUNIS IN ONE CASE.

BY JAMES HENDRIE LLOYD, A.M., M.D.,

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In a former paper,[1] written in collaboration with Dr. Joseph Sailer, I reported a case of sporadic cerebro-spinal meningitis that occurred in my service at the Methodist Hospital in this city. In that paper Dr. Sailer made a careful microscopic report of the condition of the tissues, but a bacteriological study was unfortunately not made. The history of the case, before admission to the hospital, was imperfect and could not be supplemented or corrected, so that evidence of the source of the infection was entirely lacking. At the time little, if any, true spotted fever was prevailing in this city, so far as I could ascertain. The case, which was one of extreme virulence, was therefore a good type of the sporadic cases which now and then occur from sources of infection that remain obscure.

I have recently had two other cases in my wards at the Philadelphia Hospital, which conformed clinically very closely to the same type, but the autopsies showed that only one of them was a true case of diffused purulent meningitis of the brain and cord. The other was a case evidently of syphilitic infection, presenting foci of inflammation and necrosis beginning apparently in the vascular system. These cases were admitted to the hospital almost at the same time, and the autopsies were performed on the same day. The case of purulent meningitis was of especial interest inasmuch as the bacteriological examination, made by Dr. L. N. Boston, revealed the presence of the *Bacillus coli communis* and no other micro-organism.

As the chief point of interest in cases of sporadic cerebro-spinal meningitis is with reference to the exact agent of infection, I have thought best to report this case in spite of the fact that the minute anatomical changes have not yet been determined by the microscope. To the naked eye, however, these changes, while striking in their gross appearance, presented nothing unusual in such cases. The inflammation, with copious exudation of a purulent fluid, was apparently confined entirely to the pia-arachnoid, no foci being discoverable in the substance of the cerebro-spinal axis. If the brain-tissue was at all involved (as it doubtless usually is in such cases), the changes were as yet too minute to be discoverable by the naked eye. No bacteriological examination was made during life by means of lumbar puncture, but the cultures were made from material taken at the autopsy from beneath the arachnoid.

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[1] Journ. of Nerv. and Ment. Dis., Sept., 1896.

The history of the case is as follows:

July 24th. The history obtained by ambulance physician was that early on 22d (3 A. M.) the patient was seized with headache, dizziness and vomiting. On Saturday morning he arose; shortly after he fell, became unconscious, and has been in that state ever since.

On the patient's admission the head was retracted and turned to the right. The muscles of the back of the neck were rigid. The pupils were unequal, the left being more dilated, and they did not react. There was slight ptosis of the upper lid on the left side. The tongue did not deviate. The right arm and leg were flaccid, and fell helplessly when lifted. The left arm and leg were in constant motion, and the patient was with difficulty kept in bed, in spite of his hemiplegic state. The sensation was apparently normal. The right arm and leg would move when pricked with a pin, provided the left arm and leg were restrained; otherwise they would not. The knee-jerks were present; plus on right side. Plantar and cremasteric reflexes present. No ankle clonus.

Scattered over the forehead, extremities and the body was a profuse eruption. It was particularly well marked on the arms, about the elbows, inner aspect of thighs, about the knees and over the tibiæ and feet. In places it had a dirty-brownish color, but over the prominences it was very red. The patches were distinct, circular, not elevated, and showed a tendency to run together over the bony prominences. This eruption was evidently recent and the result of the blood-infection. It was not hemorrhagic.

The heart's action was very rapid. A few moist râles were heard in the lungs.

Later—7 P. M. The retraction of the head was more marked. Hyperæsthesia was well-marked; the slightest tap on any part of the body caused a reflex, with moaning and restlessness. The right arm and leg were occasionally moved voluntarily, and they resisted strongly when attempts were made to straighten them out. The right side of the face was now distinctly flattened, and the face was pulled to the left. Tache cerebrale was demonstrable. The urine was voided involuntarily and showed a heavy deposit of albumin.

7–25. The patient was not so restless, and the head was no longer retracted or turned to the right; was profoundly unconscious. Temperature has been rising steadily all day. The pulse was more rapid and weak and respirations were very shallow. The lungs filled gradually from œdema and the patient died at 2 A. M. on the 26th inst., being the fourth day of the disease.

The temperature in this case was 101° on admission. It fell once or twice the next day to near the normal point and then rose gradually until it stood at nearly 106° at the moment of death.

The urine was highly albuminous, and showed a few pale granular casts.

The autopsy was as follows:

The bones of the skull and the dura mater were not involved. Extensive purulent meningitis was present over the surface of both cerebral

hemispheres, extending down over the parietal aspects; also over the superior surface of the cerebellum just behind the anterior peduncles. The purulent process also extended along the velum interpositum, overlying the third ventricle, the walls of which were matted together. This was the only invasion of the ventricles. The under surface of the brain, crura, pons and medulla were but little, if any, involved. The inflammation was evidently primarily meningeal, and had apparently remained so, for no foci of suppuration were found by the naked eye anywhere within the brain-substance, either in the hemispheres, the basal ganglia, the mid-brain, pons, post-oblongata or cerebellum. Extensive purulent meningitis also involved the spinal cord. It was confined to the posterior surface of the cord in the dorsal region. The cervical and lumbar enlargements and the cauda equina were not involved. Hence there was not continuous or direct connection of the inflammation in the spinal canal with that within the cranium. Cultures were made direct from the subarachnoid purulent exudate, the overlying tissue being first sterilized by dry heat.

The second case, which proved to be one of extensive syphilitic infection, was of interest not only in itself but as affording a comparative study with the preceding case. The two patients were in the hospital at the same time, in neighboring beds, and the autopsies were performed on the same day.

The history is as follows:

July 19th. This patient was admitted from the House of Correction with absolutely no history. He was completely aphasic and somewhat stuporous, so it was impossible to obtain any history from him directly. He was of middle age, well developed and robust.

He was evidently in the acute stage of secondary syphilis. The mouth was in a frightful state; white patches were present on gums and buccal surfaces. The roof of the mouth was ulcerated. A copper-colored, macular eruption was scattered over the chest and abdomen. The superficial inguinal glands were enlarged.

The pupils were unequal, the right being slightly the larger. Both reacted readily to light. The tongue was deviated to the right side of the mouth. The right arm and leg were paretic, and the head and eyes deviated to the right. The arm and leg were rigid.

The knee-jerks were present. Ankle clonus was present, more marked on the right. Plantar reflex present on both sides.

The urine was slightly albuminous. The temperature in this case was but little affected until towards the end, when it rose rapidly. It was higher in the right axilla than in the left.

This patient continued stuporous, but restless. He gave little evidence of pain in the head.

There was not the same evidence of meningitis as in the former case, as there was no retraction of head and no hyperæsthesia. The case, moreover, was of longer duration, and was considered during life to be one of cerebral thrombosis due to syphilis.

The patient died on the sixth day after admission to the hospital.

The especial interest in the case was in the association of the prominent symptoms of secondary syphilis with an evident syphilitic endoarteritis in the brain. This association is certainly very rare, for the vascular changes are usually seen only in the third stage of syphilis.

The autopsy was as follows:

Interstitial nephritis. Old tuberculosis in lungs, cured.

Brain. The arteries at the base were atheromatous or rather *syphilitic*. On the left middle cerebral artery, far within the fissure of Sylvius, was a small limited area of purulent infection. This was apparently a thrombus. It was superficial. In the right lenticular nucleus there was an area of softening, involving upper part of internal capsule. Both lesions were the results of primary vascular changes.

In commenting upon the bacteriological findings in the first case, I do not feel warranted in drawing any very positive conclusions. According to the recent report of Councilman, Mallory and Wright, who have reviewed the literature, the distinctive micro-organism of epidemic cerebro-spinal meningitis is the *Diplococcus intercellularis* of Weichselbaum. This organism was found in most of their cases observed in Boston. As these authors point out, however, a purulent meningitis may be caused by other micro-organisms, as, for instance, the pneumococcus, the streptococcus, the tubercle-bacillus and the anthrax-bacillus. It is possible that this list does not exhaust the number of microbes that can act thus. In sporadic cases, such as mine, the probability is not slight that the infection is not always due to the *Diplococcus intercellularis*, which seems to have more of an epidemic range. A few observers, I believe, have found the *Bacillus coli communis* in cases of meningitis. Thus the authors just quoted report its presence in one of their cases (Case 53) but consider it as a "contaminating" organism, *i. e.*, not the essential one. In my case no other organism was found, and as the exudate was copious this fact is significant. It must be remarked, however, that the vitality of the diplococcus of Weichselbaum is said to be low, and that it may consequently fail to grow in a culture medium. This is perhaps especially true of cases in which the patient has been dead for some time. In the case here reported the autopsy was not made until the second day after death.

It may be too much to conclude from this one case that the *Bacillus coli communis* can be the cause of purulent meningitis, but the observation is recorded for what it is worth. No focus of primary infection in the intestinal tract was observed.

THE UTILITY OF THE RÖNTGEN RAY METHOD OF DIAGNOSIS.[1]

BY CHARLES LESTER LEONARD, A.M., M.D.,

Associate of the Pepper Laboratory of Clinical Medicine; Skiagrapher to the University Hospital, etc.

THE universal application of Röntgen's marvelous discovery to medicine was almost as instantaneous as its popular diffusion through the daily press, and its aid was invoked in many cases, where the crudeness of the knowledge and methods of employment then available, made failure and disappointment inevitable, and brought discredit upon a method full of scientific value and practical utility.

Such a fate was, however, to be expected. It is the common one of all discoveries that become popular fads before scientific study has made them capable of accurate use. The stimulation of careful scientific study and the determination of methods of precision have been the valuable results which have followed these early errors. They have greatly increased the efficiency of this method of diagnosis, and have made attainable that which was then considered almost impossible, or at most the utmost limit which could be hoped for.

A very injurious effect of these early failures was a certain sort of apathy and almost distrust which was engendered by them in the minds of those of the profession who have not been in constant touch with the scientific progress made in this direction and have not had the opportunity of observing its practical application, and of seeing the results attained.

Great injury has already been done by this apathy, for the more general employment of this means of diagnosis is necessary to the progress of medical science. It should be employed not only in the obscure cases where it has become an essential, but also in all those cases that recover with some disability which its employment would have obviated. Thus in fractures this method of diagnosis is absolutely essential to the accurate diagnosis and individual treatment of all injuries that involve the articulations, if grave loss of function is not risked. Its general employment in all cases gives a detail to the diagnosis, obtainable in no other way, and wards off many of the unforeseen accidents that often result in non-union. The so-called simple fractures have been shown to be more dangerous to the future function of the limb in some instances, than a compound fracture. In addition the examination is absolutely painless, the shock of etherization is avoided, while the traumatic injury to the already devitalized tissues and the increased exudation consequent upon manipulation are much lessened, leaving the parts in a more favorable condition for rapid repair. The practitioner has also the safeguard of absolute proof of the condition of the parts before setting, and a skiagraph taken with the part in position shows that it has been properly adjusted.

[1] Read before the Lehigh County Med. Soc. at Allentown, Pa., Nov. 12, 1898.

The location of foreign bodies by this method has already gained universal application, and simple yet accurate methods of precision[1] have been invented that make the localization of even the most minute fragments absolute and practical. Foreign bodies can be located in all parts of the trunk, limbs and head, including the brain and eye. In the latter the definiteness of the localization greatly facilitates the removal, or as frequently happens, shows that the foreign body did not penetrate, but only wounded the eye; thus unnecessary probing is avoided and the only indication is the treatment of the wound.

In its application to vesical calculi the method adds to our knowledge in ordinary cases, the number and size of the calculi, and in the more difficult cases detects encysted calculi and shows foreign bodies that have been introduced into the bladder.

The greatest progress in diagnosis is in calculous nephritis,[2] in which this method is capable of establishing a differential diagnosis where other means of physical diagnosis have entirely failed, and where the symptoms are so indefinite that an exploratory operation is hardly justified.

The early researches in connection with the opacity of renal calculi showed them to differ in their relative opacity to the Röntgen rays, and that certain forms were penetrated by the quality of ray which could then be made to penetrate the lumbar region. Thus only certain calculi could be shown, while others might escape detection. It is now possible to definitely determine the presence or absence of all calculi. Recent improvements in technic and apparatus assure, at any time, the production of rays of any desired quality in sufficient quantity to penetrate the lumbar region, and differentiate between the surrounding structure and all forms of calculi, and in suitable cases the outline of the kidney may be distinguished from the other tissues.

Thus an absolute diagnosis of the presence or absence of all the forms of calculi is possible in all cases, even in the early stages of the disease, where the vagueness of the symptoms makes the differential diagnosis by other means, from other forms of renal disease, difficult and even impossible. It is in this early stage of the disease that a diagnosis is most valuable; for in calculous nephritis early diagnosis and operation are of the greatest benefit, since operation is always indicated by the presence of a calculus, and its early detection permits the operation to be performed at a time when the disease is in its incipiency and the destruction of the renal tissues, with a concurrent infection and suppuration have not increased the risks. The imminent danger of anuria with impaction of the calculus, which is liable to occur in cases of small or quiescent calculi, is avoided by this method of diagnosis.

In those cases in which calculi are known to be present[3] the minute

[1] *Annals of Ophthalmology*, Vol. VII., No. 2.
[2] *Phil. Med. Jour.*, Aug. 20, 1898.
[3] *Archives of the Röntgen Ray*, May, 1898.

detail given by the skiagraph materially assists in the success of the operation. No other method except double exploratory operation is capable of determining the absence or presence of calculi in the other kidney, a condition which the nature of the trouble makes very probable.

The diagnosis of conditions in which only the softer tissues are involved, is one of more technical difficulty than those involving the bones or opaque foreign bodies, yet sufficient progress has already been made to justify the opinion that future development in this direction will add materially to the practical results already obtained. Already where great contrast exists in the relative opacities of the softer tissues, skiagraphs have been produced that add definiteness and detail to the results obtained by other methods of physical diagnosis. They have differentiated between mediastinal tumors and aneurisms, between hyperæmic or pneumonic areas of the lung and the normal portions, between tumors of the liver and tissues not impregnated with bile, besides adding a definiteness to the picture which was indefinite as formed from the other physical data obtained.

The outlines of the kidney, shown in the skiagraphic examinations for renal calculi, make it highly probable that the position and size of renal tumors, or the malformation or entire absence of a kidney will be readily detected.

This field of investigation and the perfection of scientific methods in the differentiation between the less opaque tissues are as yet only partially developed. In certain directions sufficient progress has been made to make this knowledge practical and to demonstrate the possibility of greater progress in the future.

There have been frequent hopes expressed that the Röntgen rays might be found to have some therapeutic value, and numerous cases have been reported in which beneficial results have been obtained through their employment. All the results so far reported are readily explained by the action produced by the static charges induced in the patient's tissues by the high potential induction fields surrounding the coil and tube, into which they are introduced. Similar, yet better, results can probably be obtained by the employment of the electric currents derived from the ordinary forms of apparatus and with the advantages of efficiency and greater control.

The Röntgen ray is in reality of use only as a new and accurate form of surgical diagnosis. Its proper application requires a knowledge not only of the electrical phenomena involved, but also of the anatomical and surgical relations and possibilities as viewed from the skiagraphic standpoint. Like all other methods of physical diagnosis, constant study and application in clinical work are essential to the production of accurate and valuable diagnostic results. All the time that has elapsed since its discovery has not sufficed to overcome all the difficulties that have been met, and the experience gained in this time is necessary for the avoidance and recognition of fallacies that are ever too ready to creep in. Unless

the conditions are correctly and definitely known under which a certain skiagraph was taken, a correct diagnosis can not be formed. Experience is thus as essential in reading skiagraphs as in taking them.

A skiagraphic examination is a form of surgical consultation capable of giving an absolute and precise diagnosis. The majority of patients can be brought to the examining room and apparatus, while it is practical, where the patient is confined to bed, to make the examination at the bedside.

To the practitioner the Röntgen ray method of diagnosis is a means of obtaining precise information of the patient's condition which can be obtained in no other way. It should be employed in every case where experience has shown that better results may be obtained by treatment or operation based on the knowledge it affords. Like all other forms of consultation, it benefits both the patient and practitioner, giving the patient the benefit of the latest scientific form of diagnosis and the practitioner the safeguard of a divided responsibility.

TALKS TO GENERAL PRACTITIONERS.

A polyclinic in print embodying simple lessons in so much of the newer methods and procedures in the specialties as it is important and practicable to teach in this way to physicians generally; and the occasional rehearsal of old but neglected truths.

HEMORRHAGE FROM THE GENITAL TRACT.

BY E. E. MONTGOMERY, M.D.

It has seemed to me that no symptom receives so little consideration, and yet may be so grave in its character as that of genital hemorrhage. It is true that it may seem slight, of but little significance, or may be an indication of grave trouble which will demand prompt attention to save the life of the patient. Its significance varies with the age of the individual, and with the accompanying subjective and objective symptoms. It may be indicative of local disease, of disease in the enveloping tissues or organs, or the result of constitutional conditions. Any condition which obstructs the general circulation may find its expression in uterine hemorrhage. Thus, obstruction of the portal circulation from disease of the liver, of the general circulation through disease of the kidneys or of the heart, will be productive of uterine hemorrhage, in the form of excessive menstruation, or irregular bleeding. It occurs also as a result of disor-

dered conditions of the blood, in the early stages of typhoid fever, and in scurvy. Diseases in the tissues and organs about the uterus may result in hemorrhage from obstruction, or through increased stimulation of the pelvic circulation. The latter condition is induced by chronic diseases of the ovaries. It is very frequent in early life as a result of ovarian hyperæmia. Thus, the young girl will usher in puberty by profuse hemorrhage and this may recur at each period for some time. Chronic inflammation results in the thickening of the ovarian envelope, the tunica albuginea, which renders it tough, firm, so that it does not readily rupture upon the maturing of the Graafian follicle. The result is that these follicles are retained, forming small cysts which greatly aggravate or increase the irritation, giving rise not infrequently to profuse and persisting hemorrhage. Obstruction of the pelvic circulation is induced by inflammatory exudate, compressing the veins while it does not interfere with the arterial flow. The tissues become engorged, the affected mucous membrane congested and thickened, with its vessels dilated, so that the menstrual flow is necessarily increased. Such a condition is also induced by pressure upon the vessels, by the presence of growths in the pelvis, ovarian, intraligamentary, uterine and particularly ectopic gestation.

Local causes of hemorrhage are diseases of the mucous membrane or changes in the uterine wall which affect the circulation of the mucous surface. First and most frequent of these is endometritis, giving rise to what is known clinically as hemorrhagic endometritis. Second, to growths which impinge upon the uterine mucous membrane, interfering with its circulation, producing a similar condition to that of endometritis. This is characteristic of fibroid growths of the interstitial or submucous variety. Third, to malignant degeneration, especially carcinoma. This affects particularly the mucous membrane, more frequently of the cervix, but also of the body. The latter is more likely to be present in women who have not given birth to children. Fourth, the retention of the products of embryonic life. This may follow parturition or abortion. What we have said of the causes of hemorrhage will afford some idea of the necessity for investigating this symptom whenever present. It renders evident the importance of investigating not only the local conditions, but the general health of the individual. The method of investigation will depend somewhat upon the age of the patient. Thus, it can be readily understood that we would not require the same investigation for an individual in the early years of life, and unmarried, that would be required later. But, even in the unmarried, the existence of persistent hemorrhage or severe hemorrhage should be considered as an indication for sufficient investigation to determine its cause. The mere administration of remedies with a view to produce contraction of the uterus, to decrease the hemorrhage, is trifling with the interest of the patient. Not infrequently patients will inform me that they have been treated by a physician for a length of time on account of severe hemorrhages, but they have resisted the importunities of the physician to permit

a careful examination as to the cause. Although they will admit that they have thus declined the only means that the physician could have of determining the disorder, they still will blame him for failure to relieve the symptoms, and particularly when conditions develop which are beyond medical control. It is far better that the physician should lose the stipend he might receive for the treatment of such a case than to accept the responsibility of treating a condition which he is not permitted opportunity to thoroughly investigate.

The method of interrogation of such a condition should be first the general health. To determine the presence of any condition which should cause a disordered state of the blood, favoring hemorrhage. Next, careful exploration of the local conditions. The history and pelvic symptoms will frequently enable us to determine that the condition is outside the uterus in the form of chronic inflammation of the appendages. The existence of inflammation in the broad ligaments shows evidence of previous pelvic inflammation in the form of cellulitis, peritonitis, or fixation of the uterus, which demonstrates the obstructed circulation. The history of the cessation of menstruation and subsequent continued bleeding, with disturbances on one side of the pelvis, possibly recurring attacks of severe pain and the presence of a lump or mass in the pelvis should awaken the suspicion of ectopic gestation. This usually comes under observation and gives rise to the symptom of hemorrhage after rupture has occurred. Continuous or irregular bleeding following an abortion or labor, especially if associated with retrodisplacements of the uterus, more than likely indicates the presence of retained products of conception or inflammatory thickening of the uterine mucous membrane as a result. Fibroid growths are generally associated with enlargement of the uterus with more or less of irregularity of its surface, and frequently by the bimanual palpation the growth may be recognized. Hemorrhage is only a product of the interstitial or submucous varieties, never of the subserous. Malignant disease generally affects the cervix, most frequently occurs after the thirty-fifth year, or may not present itself until after the climacteric. Hemorrhage or increased menstruation is generally the first symptom. Pain may be absent until the disease has progressed markedly. Offensive discharge may be a late symptom. Physicians frequently do not arrive at the diagnosis of a malignant disease until there is a cachexia, but it should be kept in mind that cachexia is a very late symptom and when present most frequently marks the period beyond which it is hopeless to proceed to radical operation. When the disease involves the external os or the vaginal portion of the cervix it is readily recognized by the touch and the use of the speculum. The general method of examining in these cases consists in the careful practice of the bimanual, thus endeavoring to determine the outline, situation, shape and relation of the uterus. Where such an examination fails to afford us definite information and has revealed the absence of any condition external to the organ, which should produce the symptoms, we should then carefully ex-

amine the uterine cavity. It is frequently advised to do this by the sound, but the information thus secured will not compensate for the injury such a procedure may produce. No investigation of the uterine cavity is as effective as its exploration with the finger. The cavity may be dilated by bougies, by cervical incision, or by the use of tents. The use of bougies will enable us to explore the cavity by the use of the curette, and this will often afford us a knowledge of malignant changes in the thickened, friable tissues that will thus be removed. The bougies, however, are mechanical dilators, and will not permit the dilatation of the cervical canal sufficiently to introduce the finger without extensive laceration of its structure. The most effective method of accomplishing this is by the use of tents. The tents which unite safety with efficiency are known as the laminaria tents, which should be perforated. These tents may be rendered sterile by subjecting them to dry heat, then placing them for a few minutes before their introduction in a solution of iodoform in ether, from which they are removed to be introduced. The uterus is exposed with speculum, the vulva and vagina have been previously carefully cleansed, the cervix and upper part of the vagina sponged with a formalin solution (1–1000) before the tent is introduced. A tent as large as the calibre of the uterine cavity will permit is introduced, or a nest of small tents may be passed. The tent is kept in place and free from contagion by the introduction of a piece of iodoform gauze, which may be left in place for twelve to twenty-four hours. Upon its removal the exploration may be accomplished by seizing the cervix with a double tenaculum, passing the finger into the canal, when, with the hand over the abdomen externally, the fundus of the uterus may be pushed down upon the finger pretty much as a glove is put on, and in this way the entire cavity explored. The growths, small fibroids the size of a hazel or hickory nut, are thus discovered and may, at the same time, be removed. Changes in the uterine mucous membrane, points of induration or infiltration are discovered. If the dilatation is insufficient at first to permit its exploration, the cavity may be cleansed and another nest of tents placed. If the first use of tents accomplishes a sufficient dilatation and the physician is unready to treat the abnormal condition, the dilatation may be maintained by packing the cavity with iodoform gauze. In this talk I wish particularly to impress the lesson that no case of hemorrhage should be permitted to go without an investigation which will be sufficient to satisfy the physician of the cause; that hemorrhage under no circumstances should be considered an insignificant symptom; that there are few conditions subsequent to the climacteric other than malignant disease which should give rise to hemorrhage; that a patient should reach the climacteric without undue hemorrhage, and where it occurs the abnormal conditions demand investigation.

A FEW POINTS IN THE TREATMENT OF IRITIS.

BY WALTER L. PYLE, M.D.

When one is first called to a *recent* case of acute iritis, the all-important procedure is to obtain full dilatation of the pupil. This puts the eye at rest, breaks up recent synechiæ and relieves and prevents pain and congestion. As long as the iris is attached at any point, all treatment is handicapped, and protraction of the case may be expected. First drop one drop of a four-grain-to-the-ounce solution of atropine in *both* eyes every ten minutes for a half hour, after which, if the pupil in the affected eye remains undilated, cocaine in four per cent. solution should be instilled in that eye only to render the cornea more porous, by separation of its epithelium. Then follow with three applications of one drop of the atropine solution *heated*, at five-minute intervals. Should the pupil still remain bound down, hot compresses should be laid on the eye for one or two hours with ten-minute intervals of rest, and if there be much congestion, three leeches should be applied to the temple of the affected side, and preparations made for diaphoresis. Atropine is again tried every ten minutes for a half hour. In many cases the first application of atropine will dilate the pupil, but if the case is refractory, the additional measures will usually break up recent synechiæ. When the pupil is fully dilated, remnants of the posterior synechiæ may be seen as black pigment-spots on the anterior capsule of the lens. Full mydriasis should be continued as long as there are any signs of congestion, pain or cloudiness of the aqueous humor. This can usually be effected by one drop of the four per cent. solution of atropine, three times a day for the first week, or as long as pain and congestion are severe; after the violent symptoms subside, one drop daily is sufficient. If atropine becomes irritating to the patient and causes conjunctivitis, a boric-acid wash should be given, and hydrobromate of scopalomin, gr. $\frac{1}{12}$ to ℥j, substituted.

One of the most troublesome symptoms is pain. Leeching, either by the natural leech or the Heurteloup apparatus, and hot, moist compresses for twenty minutes every hour, are the best routine measures to combat it. For two or three nights in succession the patient should be given a Dover's powder, a hot drink, a hot foot-bath, and be kept in perspiration under blankets for two hours. If the pain still continues severe, hypodermic injections of morphia, even in the temple if necessary, should be used; and sleeping potions be given at night. The agony of pain and the nervous loss without sleep are great obstacles in the way of speedy convalescence.

The diet should be light but nourishing; milk and broths are preferable. The bowels must be kept open, if necessary, by salines such as citrate of magnesia. As most of the cases are of gouty, rheumatic or syphilitic origin, the iodides are very necessary, and should be pushed. Salol, salicylates and other uric-acid eliminatives are strongly indicated. The patient should be told of the connection of the iritis with the uric-acid diathesis, and warned against future indiscretions in diet.

WHEN AND HOW TO WASH OUT THE STOMACH. (LAVAGE.)

BY BOARDMAN REED, M.D.

THE "when" involves these questions: (1) in what cases, (2) how often and (3) at what time of the day. The first is the most difficult to answer. Lavage helps many cases in a most striking manner. In others, apparently similar, it fails and may do harm. Sidney Martin, while bearing testimony to its great benefit in certain conditions, says: "The method of treatment has been much abused and must be applied with circumspection." Ewald hit the nail on the head in his recent paper before the British Medical Association when he cautioned against the "too long continuance and too frequent employment of washing out the stomach," adding that "when it does good, it does so very soon."

The tube is far more valuable for diagnosis than for treatment. In all your cases of indigestion and often in neurasthenia, constipation, insomnia and especially in stubborn headaches, you would do well to ascertain, by means of an analysis of the stomach contents under varying conditions, exactly what sort of work the organ is doing as to its secretory and absorptive functions, and also gain full information about its even more important motor function.

When such tests show a large amount of mucus, you may suspect gastric catarrh, and in most cases of chronic catarrhal inflammation *of the stomach itself*, lavage will do good; in many of them it is almost indispensible.

More often the mucus comes from the parts above, having been swallowed, and the diagnosis of chronic gastric catarrh, which many physicians attempt to make offhand, frequently presents difficulties, even with the help of chemical and microscopic examinations of the stomach contents. But this subject will be considered in a subsequent "Talk."

The most imperative indication for lavage is gastrectasis, or aggravated dilatation of the stomach, whether resulting from narrowing of the pyloric orifice (cancer or other tumors, or the cicatrix of an ulcer), from a kink of the small intestines (which may follow displacement of the stomach, colon or right kidney), or from atony of the muscular walls of the organ. Whatever the cause, dilatation, when neglected, tends to become a serious condition, and lavage judiciously done is an aid to the cure in the atonic cases, while it is a most valuable palliative in the desperate ones, until operative relief can be obtained.

2. In bad cases of gastric catarrh and in patients not too reduced in strength, provided all the results are encouraging, it will be proper to wash out every day at first, until the amount of mucus is markedly lessened. This will be the more advisable if the microscope shows the presence of

numerous yeast fungi or sarcinæ in the wash-water. As the conditions improve, or sooner if the patient should fall off in flesh, cardiac tone or appetite, prolong the intervals, until by the end of a month or two, once or twice a week may be often enough.

When the treatment has been begun early and is properly carried out, you will often succeed in removing all the symptoms and signs of disease within two months; but in very advanced or debilitated cases, you will need to be guided by the effects, and sometimes in such cases, a radical cure is scarcely practicable outside of a special institution. The best that can be accomplished then under ordinary conditions, is palliation, and for this you may find it useful to cleanse away the accumulated mucus and bacteria, at least once a week for long periods.

3. In nearly all cases the best time for lavage is before breakfast. At this time no remains of digested food are in the stomach to be washed away and lost to the system, except in the worst cases of dilatation. It is a most inconvenient hour for the physician, but it is usually practicable to have nurses trained so as to do the work with all necessary skill. A good nurse can report intelligently as to the macroscopical appearance of the wash-water, and in all important cases she should from time to time save samples of it for microscopical examination—a little of the first brought up for examination as to the amount of mucus and presence of bacteria, and some of the last to be tested as to the presence of degenerated epithelium from the gastric mucous membrane. My own custom is to employ the electric centrifuge to obtain a concentrated sediment for this purpose.

Many good authorities advise that lavage be done at bedtime when fermenting food in the stomach prevents sleep. This may exceptionally be useful, especially in cases of gastralgia, but diseased stomachs are rarely empty at bedtime and experience teaches that, as a continuous practice, washing away half-digested food is disastrous. When severe fermentation cannot be otherwise controlled, it would be better to feed less by the stomach and help out by nutritive enemas.

How to wash out: Don't procure any of the complicated apparatus for lavage you will see described in the books. They are all troublesome and unsatisfactory. The best and the simplest is a medium-sized tube (such as was described in the first of these "Talks"), though the larger the better, provided the patient tolerates it well. It should be long enough to reach three feet outside the mouth. A bulb in the course of it will be helpful in case of blocking; and a separate large glass funnel holding a pint is much better than the small soft-rubber ones that are found attached to many of the tubes in the shops. If you have not analyzed the stomach contents and do not know whether hydrochloric acid is deficient or in excess, it will be safer for you to use tepid or warm (not hot) water which has been sterilized by boiling, with bicarbonate of sodium dissolved in it to the extent of one or two teaspoonfuls to the quart. If the treatment should be continued longer than a month, and you remain in ignorance as to the gas-

tric secretion, it will be best to omit even the soda after that time and wash out with boiled water only. If an analysis has shown that you are dealing with an acid gastric catarrh (in which the glands secrete an excess of HCl and the ferments as well as of mucus) you can dissolve a tablespoonful of soda to the quart of water and go on with this for a long time, provided the hyperacidity persists and the patient is improving in nerve tone. But don't mistake the familiar sour stomach of fermenting carbohydrates for hyperacidity from an excess of HCl. In the former condition the prolonged use of alkalies is very hurtful.

When there is a marked deficiency of HCl, the water may be hotter and table salt, from a teaspoonful to a tablespoonful, may be added to each quart. Exceptionally, stronger antiseptics or astringents may be used. The most serviceable I have found to be alum, one-half to a teaspoonful, and nitrate of silver, one or two grains to the quart. Always wash out again with a salt solution after the nitrate of silver. Strong HCl, a teaspoonful to the quart, will often answer well, when there is a marked deficiency of gastric juice.

Many other drugs, including boric acid, salicylic acid, tannic acid, resorcin, and alumnol are employed in this way, but all of them, and especially the stronger ones, are liable to have an injurious action when continued long.

The tube with the funnel inserted in it having been introduced, the solution previously prepared and placed in a pitcher at hand, is poured in, a pint or quart at a time. Just before the last of the water has disappeared from the funnel the latter should be carried quickly down toward the floor and held in the inverted position over a pail. By siphonage the liquid now flows back into the inverted funnel where it may be inspected before emptying. A piece of glass tubing inserted at some point of the tube outside the mouth, or between two sections of tube, will enable you to see when the liquid is flowing through properly. One quart of water is quite as much as most patients will care to have used at the first washing or two, but later you should gradually increase the quantity, until finally several quarts, or enough to cleanse away all the mucus, may be introduced, but not more than one quart at a time, and in some very weak stomachs a pint at a time will be more advisable. Be careful always to get out again all the water you put into the stomach, especially when medicated.

A practical wrinkle which I have found to lessen considerably the time required to loosen and detach all the mucus in old gastric catarrhs, is to have the patient drink a tumbler or two of warm water before taking the tube, and then lying down on the back, make voluntary contractions of the abdominal muscles so as to splash the water around in the stomach for three to five minutes. When this is done, scarcely one-half the usual quantity of water is required in the washing out which follows directly afterward.

Delicate patients should be allowed to rest in the recumbent position half an hour at least after lavage, and in no case should a meal be eaten within that time after the procedure.

SELECTIONS AND TRANSLATIONS.

THE DIETETIC TREATMENT OF CONSTIPATION.

Translated especially for the INTERNATIONAL MEDICAL MAGAZINE.

IN the *Actualité médicale* Cornet makes a résumé as follows of the principal rules of régime and treatment which are prescribed by Boas, Fleischer, Munck and Ewald for those subject to constipation:

Particular Foods.—They may be divided according to Boas into three categories:

A. Those that leave a residue in the intestines: bran, graham, rye and black breads; of vegetables, cabbage, turnips, carrots, asparagus, sour crout, spinach, salads, noodles, macaroni, farinaceous foods, potatoes, lentils, peas and green haricot beans.

B. Those foods which provoke a marked transudation into the intestines and thus favor the liquefaction of the intestinal contents: stewed prunes, apples, aloes, plums and apricots, also oranges.

C. Foods which induce peristalsis by their strong contents, or by the excessive production of organic acids (butyric, lactic and acetic acids). Here let us include oils and fats in the form of foods.

Drinks.—According to the individual case we advise at meals: fresh water, cold or hot, alkaline or sugary, of which a large glass, taken early in the morning often produces good results; cider, white wine and képhir. Between meals or early in the morning, buttermilk, beaten milk, whey.

Useful Additions.—One may add to the diet, honey, honey cakes, spiced bread with honey or syrup, and especially sugar of milk which we recommend in place of ordinary sugar which should be used sparingly. The sugar of milk is taken at the rate of two to three teaspoonfuls in a cup of milk early in the morning; or else a tablespoonful three or four times a day in milk, coffee, etc. To women who are not accustomed to drinking beer, a large glass in the evening may be agreeable. In the case of men certain salt dishes such as herrings, cavier, or a few puffs of a cigar may arouse the intestinal function, without its being necessary to become a smoker. Lastly, black coffee after dinner is far from being contra-indicated.

Individual Peculiarities.—We have given the principal rules of alimentation in the treatment of constipation, but there is a great individual variation, and by judicious observation, certain people may institute a régime which suits them, while disregarding the common rules. Nevertheless these exceptions are only to be made in regard to certain dishes and drinks. Thus with one a glass of milk in the morning, with another coffee with milk or cream induces an evacuation of the bowels.

Forbidden Meats and Drinks.—Fancy breads, biscuits, cakes, fillet

of beef, rice, cocoa, also meat, bread and potatoes in excess. As drinks, red wine and tea are to be avoided.

Hygiene in the Mode of Living.—Hydrotherapy is recommended particularly in cases of sluggishness of the intestines of neurotic origin manifest or hidden. The physician alone must determine the means to be adopted according to the conditions morbid and individual. It may be douches with the stream turned on the abdomen, damp envelopment of the abdomen during the night, whole baths or cold hip-baths. A lengthened change of air at some warm mineral baths as Châtel Gurgon in France or in any other place chosen according to the temperament and general health. Physical exercises that are compatible with the conditions of age, sex, temperament, the general state of health and even profession. Those which are the best are the chamber or Swedish gymnastics, walking, riding, swimming, rowing. The idea is to divert the mind in the neurasthenics and those that are overworked and to bring into special play the muscles of the abdomen which coöperate in this mechanism of defecation. It is for this reason that we give the preference, after Swedish gymnastics, to swimming and rowing, and especially to the games of bowling, tennis, croquet, skittles, and to the common exercises which any one may take by himself in the following manner: Lie down on the floor on one's back with arms crossed and try to get into a sitting position by the aid of the lumbar and the use of the flexor muscles of the abdomen alone. This movement of sitting up and lying down should be repeated a fixed number of times, and if at first one does not succeed in keeping the legs still and in a horizontal position, the feet may be braced against the base of the wardrobe.

Massage, too, if it is to produce lasting results must not be of a few weeks' duration, but of some months. It consists of short methodical slappings, of pats, kneadings and rubbings. It must be done by the doctor or by a clever masseur or masseuse. The effect of the massage is not to move the chyme and intestinal contents, but to excite peristalsis and encourage intestinal circulation. Electricity is not of as much value as massage. Still expert practitioners have obtained good results from it, but only in cases of atony and not in spasmodic contractions, which are absolute contra-indications.

Laxatives and Purgatives.—In habitual constipation purgatives are the "ultima spes" and are only used in cases of absolute necessity. We say more: no purgative should be taken without the advice of a doctor. The effect of the purgative is only the effect of some trouble caused in the organism, of which the intensity is variable but which none the less presents, according to the temperament and the state of health, very decided contra-indications and dangers.

Contraindications.—Purgatives in constipation are forbidden when arising from peritonitis, in ulcerations of the intestines, tonic contractions and organic stenosis. According to the circumstances oily purgatives (castor oil and olive oil in large doses) are difficult to digest. The drastic ones, such as aloes, senna, colocynth, and German brandy, sometimes irritate

the large intestine and neighboring organs, congest hæmorrhoids, etc. As to saline purgatives: sulphate of magnesia, mineral waters, etc., have troublesome after-effects, encourage constipation, produce violent indigestion, nervous troubles or faintings if taken by persons weak and excitable, who for some reason are peculiarly susceptible.

Regularity of Hours.—That is to say, according to the good advice of Trousseau, the patient should attempt to have a movement, whether he has the desire or not, at the same hour each day and whether he has a movement or not. Force of habit will soon make it necessary to defecate immediately after breakfast or dinner according to the habit which has been established. This is usually and physiologically due to the excitation of peristalsis by the contact of the food and drink with the gastric mucous membrane, or perhaps it is the commencement of the digestive process. However it may be, it is good to adopt one or other of these hours for an habitual visit to the water-closet in cases of coprostasis.

Warmth in Water-closets.—This consideration seems unimportant, yet there are some people who become nervously constipated solely as the result of the cold. Place them in a warmed water-closet and their constipation disappears. This is a reason for keeping the water-closets warmed.

Position at Stool.—Regularity in going to the water-closet is not the only essential. A flexed position with the abdomen pressed against the thighs is the best, as it aids the action of the muscles that are called into play in defecation. In the matter of dress, especially in young girls, the clothing should not be too tight in attempting to have small waists. Men should wear suspenders and not tight belts.

Lavage of the Intestines.—Washing by injections are beneficial auxiliaries in the treatment of constipation; unfortunately, their power decreases with use.

Indications.—Injections are of value when there is an excessive collection of fæcal material in the lower bowel where a dietetic treatment does not suffice. We give them in preference to laxatives and purgatives, as these sometimes cause muscular spasms and severe pain without producing an evacuation.

Contra-indications.—Injections should not be employed in cases of stenosis, ulcerations and very carefully after severe hemorrhages.

Method of Employment.—A graduated syringe should be used and the amount and warmth of the water regulated to the individual case. The injections of oil as recommended by Kussmaul and Feinberg have the advantage of entering gradually and of distending easily and progressively the large intestine. The oil produces less peristaltic excitation, but it remains longer in the intestine and favors disintegration of the fæcal material. When large quantities of oil are employed, a larger canula should be used introduced higher with the patient preferably in the dorsal position, the nates slightly elevated.

The anal injection of glycerine in a dose of about a teaspoonful has been advised by Anacker and Oidtman.

REVIEW OF MEDICAL AND SURGICAL PROGRESS

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

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Electric Light in Rheumatism and Neuralgia. Kozlovski, in *Vrach*, has published an account of his treatment of rheumatism and neuralgia by means of exposure to the electric arc. He was induced to make these observations by the statement of Ewald, who is medical officer to some large iron works, that he had noticed that, since the introduction of the system of electric welding, there had been a notable diminution in the number of cases of rheumatism, neuralgia, migraine and other nervous diseases among the workmen, which he attributed to the beneficial effect of the electric light. In order to bring this therapeutic agent within the reach of ordinary patients, Kozlovski has fitted up a consulting room with a suitable plant for producing the electric arc, which consists of a six-horse-power oil engine, a dynamo, thirty-five Tudor accumulators, a rheostat, ampère-meter and electric arc lamp with reflector. With these he obtains an electromotive force of 50 to 60 volts and a current of from 250 to 300 ampères. The patient is placed at a distance of one and a-half meters from the light and protected by blue spectacles and also by a screen of cardboard in which an aperture is cut to allow the light to fall on the affected region of the body. To this it is exposed for from three-quarters of a minute to two minutes. The patient feels a slight sensation of heat, though the temperature is never raised more than 4 degrees F., where the light falls on the skin, but nothing more until six or eight hours afterward, when itching and tingling are felt and the skin becomes reddened. Some forty-eight hours later, desquamation occurs, which lasts for two or three days. In the course of three months Kozlovski has treated thirty-eight patients, varying in age from 13 to 70 years, by the electric light. There were eight cases of sciatica, all of which recovered; four of neuritis (locality not stated), two of which recovered; eighteen of chronic rheumatism, fourteen

of which recovered; three of lumbago, all of which recovered; three of occipital neuralgia, of which two recovered; and two of trigeminal neuralgia, one of which was greatly benefited. In most cases three or four sittings produced an amelioration of the pain. They were continued at intervals of three or four days, according to the amount of cutaneous irritation, but the total number of sittings never exceeded a dozen.—*Journal of the American Medical Association.*

Observations and Notes on Widal's Reaction. McCelland and Isbister (*Australasian Med. Gaz.*, 1898) say their tests were of even more value from a negative than a positive point of view, as was instanced by cases which early might easily have been mistaken for typhoid were it not for the absence of the reaction, but which eventually proved to be pyonephrosis, abscess of liver and Beri-Beri. In a sailor who gave a history of malaria, a mild fever was accompanied by the Widal reaction and ran the course of typhoid. Here, the presence of malaria appeared in no way to affect the positive value of the test. On the other hand, in a patient having simply malaria the test was negative. In all, the test was applied in eighty patients and in only one was any doubt thrown upon its accuracy. Here, with many of the symptoms of a mild typhoid fever there was no reaction. In most of the cases the reaction was present by the end of the first week, but in one it did not appear till the ninth day and in another not till toward the end of the second week. In most cases the reaction remained present for a long time, but in one disappeared fifteen days after the temperature reached normal and in another twenty-one days.

Study of the Action of the Splenic Pulp on the Bacillus of Typhoid Fever. Mills (*Bulletin of the Royal Academy of Medicine of Belgium*, 1898) set himself the task of solving the following questions: 1. What is the effect of action of the splenic pulp in contact with the typhoid bacillus of varying degrees of virulence? 2. Does this action depend upon the cells themselves or upon the intercellular liquid? 3. What is the nature of this action? After adverting to previous work done in this line and the theories of the function of the spleen, he details briefly the methods of experimentation he employed and sums up as follows: 1. The splenic pulp brought into contact with the typhoid bacillus increases its multiplication and virulence, and the longer the time of contact the more marked is this action. The increase of virulence is probably due to a liberation of toxines. 2. This action is brought about by the cells and not by the intercellular liquid. 3. Its nature is related to the action of certain ferments. But, as the committee appointed by the Academy to report upon this paper suggest, while these results are of the highest interest, the author has failed to present any detailed experiments. Nor is his experimental technique sufficiently clearly designated. In view of

these facts the paper must be regarded rather as a preliminary communication.

Cutaneous Administration of Salicylates in Rheumatism, Gout, etc. Gros (*The Medical Fortnightly*, Sept. 15, 1898) regards rheumatism and gout as closely akin and believes that in rheumatism the salicylates are a true specific, while in gout they are at least of great benefit. In order to obviate the unpleasant effect of the salicylates on the stomach it is advised that they be administered by inunction, the following mixture being suggested by Professor Dejerine at the Salpetriere. Salicylic acid, ten grams; alcohol, fifty grams; castor oil, one hundred grams. A teaspoonful of this mixture is poured into the hollow palm and rubbed into the affected parts during a few minutes; the part is then covered over with oiled silk or rubber and again enveloped in several thicknesses of flannel or cotton. The effect of this medication is very marked, the pain rapidly subsiding. Even though the pains be not of a rheumatic or gouty nature they are often relieved. If oil of wintergreen be substituted for salicylic acid the efficiency of the liniment will be increased.

Cold Baths in Typhoid Fever. Simon Baruch (*Med. Rec.*, Oct. 1, 1898) holds that while the Brandt treatment of typhoid fever has been demonstrated to be that which is most successful, which conclusion is being reached by an increasing number of prominent practitioners, yet in many cases, especially in the later stages, it is inapplicable. Here he advises ablutions or affusions and trunk compresses. He holds that the lethal element is a toxemia which overwhelms the nervous system, producing the high temperature and other symptoms. The application of cold ablutions, effusions or baths produces a shock which is followed by a reaction, the stimulating effect of which is conveyed to the central nervous system, arousing it. He has abandoned altogether sponging, which simply cools but produces little or no shock or subsequent reaction.

Cretinism Following Acute Thyroiditis. Edmund Shields (*New York Med. Jour.*, Oct. 1, 1898) records a case of acute inflammation of the thyroid in a child of ten months which was followed by an arrest of growth and development and the usual symptoms of cretinism. She was treated with extract of thyroid for a short time with marked improvement.

The Estimation of Uric Acid in Urine. Maisch (*Jour. of Amer. Med. Assoc.*, Oct. 22, 1898) reports the results of his experiments on the various tests for uric acid in the urine. He found most of them either inaccurate or objectionable on account of complex manipulations. The most satisfactory method he considers to be that of Hopkins, which is carried out as follows: 100 cc. urine are saturated with ammonium chloride, the quantity usually necessary being 30 gm.; even should an excess of the latter be used the undissolved portions could easily be dissolved in a mini-

mum amount of water just before pouring the last portion on the filter. Hopkins allows this solution to stand for two hours, but v. Jaksch places it aside for twenty-four hours. Using the shorter method, a quantity of ammonia water is added (Maisch usually uses about 5 cc.), and the liquid filtered after fifteen minutes. The flask in which the precipitation was carried out and the precipitate and filter are washed several times with a saturated aqueous solution of ammonium chloride, after which the filter is punched through and the precipitate transferred to a small beaker with hot water from a spritz bottle, then 1 to 2 cc. of concentrated HCl added and the liquid evaporated to about 20 or 15 cc., when it is allowed to stand for about one hour, or until it is cool. The precipitated uric acid is then collected on a tarred filter, washed with water, and, after drying, is weighed, or the precipitate, after washing with water, is repeatedly treated with alcohol and thus transferred, by means of alcohol from a spritz bottle to a tarred watch glass which, after drying, is very hard. Besides this gravimetric method, Hopkins also estimates the uric acid as obtained at the end of the process by titration with a solution of potassium permanganate. Maisch prefers to weigh the uric acid, as being the most accurate of the two methods.

The Comparative Etiology of Diphtheria. (*The Lancet*, Oct. 8, 1898, No. 3919, p. 945. Abstract from *Journal de Clinique et de Therapeutique Infantiles*, Sept. 22, 1898.) The ca is especially liable to diphtheria. The disease also occurs in fowls. Gerhardt reports an epidemic among fowls of a disease resembling diphtheria. The mortality was 50 per cent. Four cats living among the fowls died of the disease, and four out of six attendants were attacked. R. Jacobi reports an instance of five children having diphtheria, and three cats which played with them during their illness died with false membrane on the pharnyx. Low reports an instance where a cat carried diphtheria to children. The fact that cats and rabbits may have diphtheria has been well established, but distinct instances of the disease being spread by cats, rabbits and fowls constitute important additions to the literature of the subject.

Agglutination of Koch's Bacillus by Human Serum. (Paris Correspondent of the *Lancet*, Oct. 8, 1898, p. 963.) Arloing and Courmont (Academy of Sciences, Sept. 19th) report the result of their researches upon the agglutinative action of human serum upon the bacillus of tuberculosis. Only the superficial layers of fully developed cultures will give the reaction. The best results are obtained with perfectly fresh and colorless serum. Blood is collected with aseptic precautions, the clot removed by centrifugalization. The test is made in tubes of small diameter, which are kept slanted. Mixtures of three strengths are used: 1 part of serum in 5 of culture, 1 in 10 and 1 in 20. Reactions with dilutions beyond these limits are unreliable. The time requisite for the reac-

tion varies; it is less than in typhoid. The tubes should be examined at the end of two, ten and twenty-four hours, and should be controlled by a tube containing no serum in which there should never be any precipitate, and also by the microscope. In positive reactions the tube becomes clear, but may retain traces of cloudiness. The reaction is difficult to obtain, and the results are not yet sufficiently definite to be conclusive. Twenty-six patients, evidently tuberculous, were examined; 69 per cent. reacted with the mixture of 1 in 10, or 1 in 20; 23 per cent. with a mixture of 1 in 5; 2 cases, evidently in advanced tuberculosis, did not react. Of twenty-two patients but slightly tuberculous, 82 per cent. reacted with a mixture of 1 in 10, or 1 in 20, and 13.5 per cent. with a mixture of 1 in 5. Of twelve patients suffering from surgical tuberculosis 50 per cent. reacted strongly, and 50 per cent. feebly. Of twenty-one patients suffering from various disorders, fourteen gave no reaction and seven a feeble one. Of thirteen patients with typhoid fever six gave negative results; two of those yielding positive results were suspected of being tuberculous. Of sixteen patients from eighteen to thirty years of age, and all apparently healthy, five reacted. Should future observations establish the correctness of these experiments, it will be seen that we have little to hope from this reaction in the diagnosis of tuberculosis.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

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The Diagnosis of the Persistence of the Ductus Arteriosus Botalli. Dr. W. Zinn reports (*Berliner klin. Woch'schrift*, 1898) a case in which the above condition was diagnosed during life from the physical signs in combination with the Röntgen rays. The patient was a woman, aged 37, very small and weak, and without cyanosis. There was clubbing of the finger tips. Menstruation had first appeared during her twenty-sixth year, and there were outspoken signs of rhachitis. The signs upon which the diagnosis was based were: increase of the heart dulness to the right, extension of the area of dulness above in the figure of a parallelogram with its left edge along the left border of the sternum, a strong murmur and thrill in the pulmonary area, occurring in systole and extending over into the beginning of the diastole. No murmurs were present at the other

valves, though the pulmonary murmur was heard all over the præcordia. This murmur was transmitted to the carotids and to the interscapular region on the left. Cyanosis was absent, and there was no accentuation of the pulmonic second sound. This last is considered by Gerhardt to be of extreme importance in the diagnosis of a patulous ductus arteriosus. The higher pressure in the aorta causes a *constant* stream of blood into the pulmonary artery, and in consequence it is dilated and its contractility is never strong enough to bring the valves together with a loud sound. A Röntgen ray picture showed widening of the great vessels at their beginning. This might denote an aneurism of the ascending arch, but the physical signs pointed undoubtedly to disease of the pulmonary artery and the condition shown in the picture was interpreted as a dilatation of the first portion of the pulmonary artery. Moreover the fluoroscope showed a systolic pulsation of the shadow extending along the left border of the sternum that caused it to bulge toward the left, denoting dilatation of the pulmonary artery. The data derived from the physical signs and the Röntgen rays confirmed the diagnosis. The fact that the patient was rhachitic is of especial interest. Such children frequently suffer from atelectasis, a condition that is frequently held responsible for persistence of the foramen ovale and ductus arteriosis.

Obliteration of the Left Common Carotid Artery and both Brachial Arteries as a Result of Embolic Arteritis Occurring in a case of Heart Disease. Dr. Sigmund Haffner, of Freiburg in Breslau, reports (*Deutsch. Archiv. für klin. Med.*, Band 60, Heft 5) what he considers to be the only case of embolism of the common carotid artery recorded in literature. The person was a man, fifty-five years of age, who had suffered for some years with mitral stenosis. Embolism of the left brachial artery developed in October, 1892; of the left common carotid artery in December, 1895, and of the right brachial artery in 1896. In March, 1897, there appeared a right-sided hemiplegia. During the summer of 1897 the patient developed the symptoms of pulmonary infarction. He died in September, 1898. The physical signs of the embolism of the brachial arteries were: loss of pulsation, hyperæsthesia and paræsthesia in the peripheral portion of the limb; and great pain radiating along certain lines, probably nerves, whose blood supply was obliterated; no gangrene occurred, and only transient disturbance of the blood supply. This was manifested chiefly by coldness and cyanosis. The radial pulse could not be felt eight and one-half months after the embolism, but three years after this the pulse was perceptible. The obliteration of the common carotid artery was manifested by persistent absence of pulsation in the course of that artery and its branches, and pain especially about the ears. At the autopsy, the following conditions were found: Stenosis of the mitral valve with the usual valvular changes, and an old thrombus growing upon the leaflets; the affected arteries were obliterated. There were several pulmonary infarctions. In the brain there

were small foci of softening in the left centrum ovale. The source of the various emboli was doubtless the thrombus attached to the mitral valve. Haffner concludes from an exhaustive research in literature that there was not a single case of embolism of the common carotid reported, except his own. Embolism in any of the branches of the left common carotid is decidedly rarer than a similar affection of the right side. There was no abnormality of the vessels in the case reported to explain this exception to the general rule.

The Alleged Retardation of the Pulse in Aortic Regurgitation. Dr. James Mackenzie (*Edinburgh Medical Journal*, Oct., 1898) has recorded a series of interesting observations upon this question. As against the statements of Balfour, Broadbent and others that there was such a retardation, Mackenzie's observations appear to show quite conclusively that there is no more retardation of the pulse in aortic regurgitation than there is in health. He employs an ingenious modification of the sphygmograph and the cardiograph for the details of which the reader is referred to his article.

The Time of Occurrence of Croupous Pneumonia and the Relation of its Prevalence to Atmospheric and Cosmic Conditions. Dr. Hans Bruner, in a very scholarly article (*Deutsch. Archiv. jür klin. Med.*, Band 60, Heft 4) considers this interesting if rather obscure subject. It is well known that the liability of infection depends upon the virulence of the infecting agent and the susceptibility of the individual. If the cocci are especially active, as in an epidemic, or if the resistance of the individual is diminished, or if the two conditions are coincident, then a comparatively unimportant circumstance may determine the possibility of infection. Such may be over-fatigue, over-eating, a sudden wetting, a blow upon the chest, etc., while the influence of the weather helps in bringing about this existing affection. It is also possible that a less easily perceivable circumstance, as the atmospheric pressure, may have some aid in the production of the disease. Making all due allowances for mistakes in histories, and recognizing that the number of cases, although about 1,000 are analyzed, is too small for great accuracy, Bruner draws the following conclusions: the initial chill of croupous pneumonia usually occurs in the evening or morning; the onset of the disease appears to depend on certain variations of the weather, and especially is it apt to occur in foggy weather with rise of temperature and winds shifting to the south, after a period of cold weather with falling barometer, and a high percentage of humidity. In epidemics it seems probable that the development of new cases is dependent upon the recurrence of some atmospheric condition. According to Falb it is probable that sudden climatic variations are more frequent, when the influence of the force of gravitation of the moon upon the earth's atmosphere is the strongest. Bruner's study of his tabulated cases, while

not entirely conclusive, appears to confirm this theory. The influence of the moon upon the occurrence of the disease, though very small, probably exists, and is exerted through its power of producing changes in our atmosphere. Further, the prevalence of pneumonia appears to vary inversely as the height of the barometer.

DISEASES OF THE DIGESTIVE SYSTEM.

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Dilatation of the Stomach with Reports of Cases Treated by Diet, Massage and Intragastric Electricity. Reed (*Journal of the Am. Med. Asso.*, July 30, 1898) reported two cases in which considerably dilated stomachs were brought within normal limits without the help of either massage or electricity. Diet and exercise were the main factors in the treatment supplemented by the internal administration of HCl for the coincident hypopepsia. In one of the cases lavage was also employed for a complicating chronic gastric catarrh. A third case of dilatation with some acid gastric catarrh, constipation and neurasthenia, was virtually cured, only a slight constipation remaining, by diet, exercise and gentle massage. A number of more obstinate cases of dilatation required intragastric electricity, usually in the form of faradization. Contraction and strengthening of the dilated stomach walls resulted in all the cases, but in the strong doses found most rapidly effective, there was usually a diminution of the secretion of HCl. In the case of some patients treated at their houses with weaker faradic apparatus good results were obtained in the way of reducing the dilatation, and sometimes in hypopeptic cases with an increase of secretion. A. R.

Four Cases of Gastric Tetany. 1. Trevelyan (*Lancet*, Sept. 24, 1898) reports three cases. The first a woman, aged forty-five, had a history of vomiting and loss of flesh with anæmia. After each increase in the vomiting she had cramps in her legs. Examination showed a much enlarged stomach, with a suspicion of a tumor at its right extremity. The urine was albuminous. The other organs presented no evidence of disease. After an attack of vomiting she had cramps in her arms and legs, not preceded, however, by a tingling sensation. The hand assumed the position described as the "obstetric hand." The jaws were also slightly affected.

The autopsy showed an enormous dilatation of the stomach, and a growth was found in the duodenum consisting of cancerous nodules. The kidneys were small and cirrhotic. In the second case, a woman of sixty presenting precisely similar symptoms, the autopsy also revealed a dilated stomach. There was a growth in the body of the pancreas, leaving the head free of disease. There was some primary carcinoma of the ovaries. Both kidneys were cirrhotic. In the stomach itself and in the duodenum there was no lesion. The third case was a girl of seventeen, who had had tetanic spasms after attacks of vomiting. Beyond being worse in cold weather they seemed to have no relation to the seasons. The girl is now perfectly well. In considering the causation of the tetany the author leans toward the theory of some form of auto-intoxication, and calls attention to the condition of the kidneys in his and other reported cases. It will be noticed that the first of these cases is the result of duodenal carcinoma, itself a rare disease. The second was due to causes outside of the stomach and duodenum, whereas the last seemed connected with some gastric disease other than dilatation. As to treatment, lavage by means of a soft stomach tube is advised. Boas recommends diuresis; otherwise the treatment is symptomatic. Operation for overcoming the gastric retention is to be considered.

2. J. S. McKendrick (*Lancet*, Sept. 24, 1898) reports the case of a man, aged twenty-six years, who was admitted to the infirmary complaining of cramps of the hands and arms of four days' duration. The attack had been ushered in by a tingling sensation. His head was painful, tongue swollen and he had difficulty in articulation. Drowsiness soon set in and he vomited a small quantity of bright red blood. The history showed indigestion of twelve years' standing. The temperature was normal, pulse ninety-six, and the respiration twenty. The tongue was protruded in the middle line; it was coated, dry and fissured. The hands were in the position known as the obstetric hand, and when the spasms came on this condition became more marked; the forehead and cheek also becoming affected. Physical examination gave no evidence of dilated stomach. In the urine there was some albumen but no casts were found. Vomiting was a constant symptom. The urine became scanty, and after two attacks of sudden dyspnœa the patient died. The autopsy revealed a marked gastric dilatation, with cicatricial contraction of the pyloric end of the stomach, and marked enlargement and caseation of the glands around, with adhesion to the stomach walls. The author concludes that the body had become debilitated from the long gastric trouble, resulting in a general weakening of the nervous system, and a consequent over-excitability of the motor cells of the cord. This was the predisposing cause and an absorption into the blood of ptomaines, produced by fermentive changes in the stomach, had produced the tetany.

(NOTE.—Evidently the physical examination in this last case was not carefully made. Marked gastric dilatation is now one of the easiest of conditions to diagnosticate. It is noteworthy, that in all the fatal cases the kid-

neys were found diseased, pointing to the close relationship of the auto-intoxication to uremia. B. R.)

Balantidium Coli. Dehio (*St. Petersburg Med. Wochschft.*, 1898) reports the observation of Gurwitsh and himself on the Balantidium Coli. It is a parasite infesting the large intestine leading to chronic inflammation and ulceration of the mucous membrane. The symptoms produced are those of chronic or subacute colitis. The patient becomes emaciated, weak and cachectic until he succumbs through exhaustion. Often the ulceration perforates, and fatal peritonitis results. The diagnosis can be made by the general cachectic appearance of the patient, the dysentery and the microscopic examination of the fæces in which the living parasites can be found in abundance. The etiology is also an important aid in diagnosis. The parasite is found in the intestinal tracts of hogs, and it is transmitted to those who handle the intestines of those animals, or in any other way come in close contact with them. Sausage-makers are especially liable to the disease. The treatment is not very promising. The patients usually come for treatment when far advanced. In the beginning, however, the disease may be aborted. Intestinal antiseptics, such as salicylic acid, calomel, etc., tend to destroy some of the parasites. Prophylaxis is the most important. A. R.

Gastric Syphilis, with the Report of a Case of Perforating Syphilitic Ulcers of the Stomach. Flexner (*Amer. Jour. of the Med. Scien.*, Oct., 1898) reports a case and cites several other cases observed by others, of syphilitic ulcers of the stomach. The latter is not at all a rare affection. From his own case he concludes that the ulcer is produced by an indirect form of necrosis of the mucous membrane, brought about by the combined softening of the submucous gummatous infiltration and the obstruction and obliteration of blood vessels in the same situation.

The Clinical Aspects of Acute Pancreatitis. Reynolds (*Munch. Med. Chron.*, 1898) reports a case of acute pancreatitis which resulted fatally. The main symptoms were frequent attacks of pain in and about the epigastrium and incessant vomiting. During the last attack patient developed in addition symptoms resembling those produced by atropine poisoning. Patient died suddenly about sixty hours after the beginning of the attack.

Nervous Dyspepsia. Murdoch (*New York Medical Journal*, Sept. 24, 1898) calls attention to the sudden and marked changes in the amount of hydrochloric acid occurring in this disease. This, together with the usual mental depression, the pain in the eyeballs and the drowsiness and loss of memory being the most prominent symptoms of the disorder The object of treatment must be to restore the lost balance of the secretory nerves, and for this purpose strychnine and electricity are perhaps our most efficient agents. In the cases he reports this treatment proved very suc-

cessful. It included especially intragastric faradization. Bathing and exercise, of course, must not be neglected, and a properly regulated diet is of the greatest importance. It should be regulated according to the state of the gastric secretions. Some patients take too little food. In closing, he quotes Allbutt: "In certain cases of neurasthenia or pseudo-neurasthenia the stomach is the primary source of departure from health; in others, if, indeed, the initiation of the morbid series lay with the nervous system, the secondary impairment of the stomach may become the central feature, and the alleged neurasthenia may be due to bad products of digestion, which, returning again to the stomach, depress it and its work still further; if so, a cure is to be obtained by gastric medication only; the stomach is the link in the vicious circle which has to be forged anew."

Latent Cancer of the Stomach. Julius Friedenwald and A. S. Hotaling (*Med. Rec.*, Sept. 24, 1898), in a report of several cases, describe the two varieties of latent cancer, as (1) those in which the gastric symptoms are absent or so insignificant that they are masked by other general symptoms; (2) those in which there are no symptoms whatever, general or local. Of this latter variety the cases are few. The authors report one case, a man seventy years of age, who at no time complained of feeling ill, but who died suddenly. An autopsy revealed an adenocarcinoma, occupying both anterior and posterior walls of the stomach, extending through the mucous layer.

Gastrectatic Dyspnœa. Albert Abrams, in a clinical lecture (*Pacific Rec. of Med. and Surg.*, Sept. 15, 1898), reports a few instances where asthmatic symptoms yielded readily to treatment for the coexisting gastric catarrh. A positive diagnosis of gastrectatic dyspnœa can only be made after a physical examination of the thorax and abdomen, and a chemical examination of the stomach contents. The author thinks the use of Turck's gyromele an important aid in the diagnosis of this condition.

The Semeiotic Value of the Different Symptoms in Cancer of the Stomach. A. Gordon (*N. Y. Med. Jour.*, Sept. 24, 1898) states that as yet there is no pathognomonic symptom of this disorder known. The disappearance of hydrochloric acid is, according to Ewald, due to the accompanying catarrhal or atrophic gastritis. The only conclusion we can draw is that chronic gastritis of a depressed chemical type is favorable to the development of cancer. The presence of lactic acid was only partly confirmed by Klemperer in a series of cases and it is present whenever there is stagnation of the stomach contents. However, both are valuable ymptoms and we ought to think of cancer when both are present. Adenopathies are of value only when they become hard like a stone, and this symptom usually appears at a period of the disease when it is no longer necessary for diagnosis. A diminution of the urea indicates deficient nu-

trition only, and diminution of the phosphates and chlorides may occur in tuberculosis and other diseases. The blood shows simply secondary anæmia. Finally, even after having made out an induration in the region of the stomach in a cachectic individual it is only with the utmost caution that we ought to pronounce the word "cancer."

Syphilis of the Stomach. Dienlafay (*Gaz. Heb. de Med.*, 1898) says when the signs of simple gastric ulcer appear in a syphilitic it may be presumed that the lesion itself is specific. Syphilitic lesions of the stomach appear under various forms: hemorrhagic erosion, ecchymoses of the mucous membrane, gummatous infiltration of the sub-mucosa, circumscribed gummata, gummatous ulcerations and cicatrices of these. The symptoms of syphilitic ulceration of the stomach may simulate all those found in simple ulcer: epigastric pain, vomiting, small or greater attacks of hæmatemesis, melena and cachexia, and when they resist treatment in a case of apparently simple ulcer, evidences of antecedent syphilis should be searched for and the proper treatment at once commenced—mercurial salts and potassium iodide.

NEUROLOGY.

UNDER THE CHARGE OF
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The Points of Distinction between Cerebral Syphilis and General Paralysis of the Insane. Hugh T. Patrick (*N. Y. Med. Jour.*, Aug. 20, and Sept. 17, 1898, pp. 256, 403) points out that the resemblance of cerebral syphilis to general paralysis of the insane is well known, and the diagnosis between the two affections is not infrequently one of much difficulty. His paper should be read in the original, as a brief abstract can hardly do it justice. Only some of the most important statements can be mentioned in this review. In proportion as the somatic symptoms predominate we may suspect the existence of syphilis, while a preponderance of psychic symptoms indicates general paralysis. Brain syphilis, in the vast majority of cases, does not come on at a remote period after infection, but occurs early, even four weeks after the initial lesion. A cerebral disease has more chances of being syphilitic if it develops within five years after syphilitic infection; developing after ten years, unless indications of syphilis of the nervous system have been noted during this period, it is more likely to be general paralysis. Active syphilitic lesions in other parts of the body indicate that the cerebral disease is a part of the same affection, but a patient with dementia paralytica may contract syphilis,

or may have distinctly luetic lesions from the infection which was the cause of the general paralysis. The gradual impairment of mental capacity with preservation of daily exercised mental functions, seen in general paralysis, is likely to be absent in syphilis. In the latter disease the clouding of the faculties is more uniform. In cerebral syphilis the symptoms may be suddenly aggravated or improved. In some paretics the incipient stage may be marked by mental eagerness and restlessness or exaltation of sexual instinct; symptoms which are not seen in syphilis. A prodromal period of neurasthenic symptoms is in favor of general paralysis. Syphilis is of more rapid course than general paralysis. Destructiveness and filthiness may be early signs of syphilis. Delusions of grandeur are much less common in the early stages of general paralysis than is usually supposed, and they may occur in cerebral syphilis. Contentment and self-satisfaction are seen in both diseases. The presence of typical fatuous delusions without signs of gross brain affection is in favor of general paralysis, and if they persist without other forms of mental trouble the probability becomes certainty. The paretic is suggestible, while the luetic is apathetic or irritable. Contrary to what is believed by many, the paretic in the beginning of his disease is always aware of mental and physical disability. The mania in the two diseases differs; in syphilis it is more violent without the delusions of grandeur and the rapid play of ideas that occur in general paralysis. The results of antisyphilitic treatment are not to be regarded as determining positively the nature of the disease in question.

Subarachnoid Serous Exudation Productive of Pressure Symptoms after Head Injuries. Walton (*Amer. Jour. Med. Sciences*, Philadelphia, v. 116, Sept., 1898) discusses this subject very practically, citing three cases and drawing the following conclusions from a study of them. In children and young adults a bruise of the brain may be the result of direct violence or of contre-coup, and may be followed by a serous exudation and edema of the brain substance. By reason of their anatomical construction the subarachnoid spaces about the motor centers may imprison the fluid, thereby causing a paralysis which lasts for a short time only. Local accumulation of fluid may be due to obscure vasomotor influence. From meningeal hemorrhage the diagnosis is to be made by the absence of gradual increase in the symptoms, by the presence of sensitiveness to pain, and by the generally atypical course of the condition. Headache, stupor, restlessness and febrile reaction may be found in either.

The Relationship of some Forms of Combined Degenerations of the Spinal Cord to one another and to Anemia. Russell (*Lancet*, London, 1898, No. 3905) cites three cases and offers arguments to show the connection between ataxic paraplegia and the changes in the spinal cord found in profound anemia. One case illustrated microscopically those

changes in the spinal cord which are said to occur in pernicious anemia, and served to emphasize the fact that such alterations may take place in profound anemia not necessarily of the pernicious variety. The symptoms of spinal cord involvement in the second case antedated by some time the evidences of anemia, and the changes in the cord were those usually seen in ataxic paraplegia and in anemia. The third patient exhibited symptoms of profound marasmus but none of anemia. An intimate association between spinal cord changes and profound anemia is probable, but anemia, as an etiologic factor in such changes, is not an absolute certainty. It most likely acts secondarily, either by poisoning or by depriving the cord of nourishment. Among the various theories of causation offered, but unaccepted, are the following: Hemorrhage in the spinal cord similar to that which occurs in other parts of the body in pernicious anemia; an endogenous degeneration due to primary affection of the gray matter of the cord; a vascular origin, *i. e.*, the changes commence in the vicinity of blood vessels with altered walls. The origin is considered by Russell to be a toxin, which by its action on the nerve elements produces in them parenchymatous degeneration. The nervous elements probably have different resisting powers which explains the distribution of the degenerative changes. The rôle played by the blood vessels seems to be only that of conveying the toxic substances. Russell argues that there are distinct diseases in which tracts of different functions are involved, or in which an affection of a tract with a certain function is followed by a similar process in other tracts of entirely different functions. Again, there are conditions in which tracts are affected which are at present regarded as distinct, but which should be considered as related. Under this latter class most probably belong the cases under discussion. If the usually chronic ataxic paraplegia can be subacute or even acute by reason of the virulence of the toxic agent or lowered resisting power of the tissues to the action of the agent, then the relationship between ataxia paraplegia and the more acute form of postero-lateral sclerosis is emphasized, although their absolute identity is not established.

A Discussion on the Treatment of Intracranial Tumors. By D. Ferrier and others (*Brit. Med. Jour.*, Oct. 1, 1898). Ferrier believes that only 7 per cent. of cerebral tumors are capable of surgical treatment, and only those which are on or near the cortex. A case is successful, according to Ferrier, only when the patient has lived at least a year after the operation and has been entirely out of the surgeon's hands. Starr's tables show that the recoveries after operation amount to 44 per cent. of the total number of cases operated on, but in some instances recovery meant only recovery from the operation. Ferrier and Whiting have analyzed all the cases reported from January, 1896, to the present time, numbering 55. Of these 36 per cent. died within a few hours after the operation; 29 per cent. died within one year; 22 per cent. recovered and passed out of the hands of the sur-

geon, but their after-history is uncertain. Only seven of the fifty-five are known to have recovered and been alive one or more years after the operation. These statistics, therefore, show complete recovery in 13 per cent. of the cases, curative or beneficial results in 64 per cent., and death in 36 per cent., but they should be received with caution. The statistics of the National Hospital for the Paralyzed and Epileptic show that the total number of cases recorded in this hospital during the last ten years is thirty-eight. In 15 per cent. the patients died within a few hours or days after the operation; in 35 per cent. they died after some weeks or months; in 20 per cent. they lived some weeks or months, but the after-history is uncertain; in 30 per cent. they lived a year or more. The total immediate mortality, therefore, of all operations for the removal of cerebral tumor amounts only to 18 per cent., and against this we have 30 per cent. of complete and about 50 per cent. of partial recoveries after operation. The mortality in operations on cerebral tumors compares favorably with that of many major surgical operations. The immediate cause of death is usually shock, hemorrhage or septic inflammation. Sudden death when cerebral tumor exists is not uncommon when no operation has been performed. Unfortunately, many cerebral tumors are infiltrating and recur after removal. We cannot tell by clinical signs whether a tumor is subcortical or cortical, nor can we tell whether symptoms are due to destruction of the areas affected or to pressure. Exposure of the supposed seat of the disease is proper, for the risks of operation are less than the consequences of non-interference. Byrom Bramwell said that his results were somewhat different from those of Ferrier. Of one hundred and twenty-three cases of intracranial tumor which had come under his observation during the last twenty-five years, operation had been performed in fourteen, and in none of these had a tumor been successfully removed. He believed that after a reasonable time, when treatment by drugs has failed, operation should be performed, even though the conditions for operation are not satisfactory or hopeful.

MEDICAL DISEASES OF THE KIDNEYS.

UNDER THE CHARGE OF
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Tapping and Venesection in Nephritis and Uræmia. Ewald (*Brit. Med. Jour.*, Oct. 8, 1898) is inclined to the opinion that diuretics act by direct irritation of the secretory elements of the kidneys. He is in favor of puncture and scarification for the removal of the transudates. These mechanical means, he believes, are not carried out energetically enough at present. The punctures should be made about every third day to prevent any accu-

mulation of fluid. The latter, when in large amounts, exerts pressure on the blood and lymph vessels of the serous cavities, and thus renders absorption extremely difficult. The albumen withdrawn with each tapping is very slight (between 0.6 and 0.75 per cent.), and it is in such cases in a form which cannot be used for organic metabolism. The rapid renewal of the fluid is due, not to the tapping, but to the disease itself. He is convinced that by these means many cases of nephritis can be cured. For the relief of œdema he advises drainage, which should be carried out in the following manner: Long tapping needles are inserted into the subcutaneous tissue parallel to the skin, the projecting part being covered with salicylic cotton and iodoform collodion. To the end of the canula is attached a rubber which is fastened to the mattress by means of a safety pin. Into each leg four or five needles are inserted. From three to five liters of fluid may thus be removed in a day. In uræmic intoxication copious venesection (200 to 400 g. of blood) offers the best means of prompt relief. This should be followed by saline infusion.

Movable Kidney. Yeatman Wardlow (*Columbus Med. Journ.*, Sept. 20, 1898) expresses the opinion that floating kidney is much more frequent than was formerly supposed. It is, at least, five or six times more frequent in women than in men. This is largely due to their lax abdominal muscles, resulting from frequent pregnancies, tight clothing, corsets, etc. Any condition which changes the normal intra-abdominal pressure may lead to a floating kidney. He is convinced that the lower extremity of the organ can frequently be detected, even when the kidneys are normal. The symptoms first to attract attention are those depending upon increased tension, and stretching of the nerve fibers in the hilum and vicinity. The constant dull and dragging pain in the loin of the affected side is often relieved by the recumbent position. Reflex symptoms and neurasthenia are always present in marked cases. Grave conditions are often produced by torsion of blood vessels and ureter, with consequent congestion of the kidney, or obstruction of the lumen of ureter. The latter condition produces pain which is more severe and colicky than in congestion of the kidney. Dislocations of the left kidney are frequently responsible for extreme constipation, by distorting the course of the colon. As a rule, diagnosis is easy when physical examination is carefully made. As to treatment, he found the abdominal supporter to give relief in six out of twenty-eight patients. Operative treatment is after all attended with the most satisfactory results.

Acute Nephritis from Cold and Infection. Lemoine (*La Presse Medicale Belge.*, Sept. 25, 1898) says that in both cases there is extreme congestion and the aim of treatment must be to reduce this and to re-establish diuresis. Eight or ten leeches are applied over the site of the kidney and the bleeding kept up, about two hours on an average, by means of warm cataplasms. Catharsis, besides reducing congestion, has a disinfecting ef-

fect and is best produced by such drugs as are not absorbed and eliminated by the kidneys, castor oil for instance. To eliminate the toxines in the blood injections of artificial serum 500 g. twice in twenty-four hours are given, always, however, after the blood letting. Otherwise the blood pressure would rise, perhaps with serious consequences. These means usually establish free diuresis and may be aided by the internal administration of benzoate of lithium, alkaline mineral waters three to four quarts a day and salol. Bouillon, rich in toxines and salts, is to be avoided as are eggs and starches. In infectious nephritis in children warm baths may be added with advantage; also rectal injections of a pint of water given every four hours. The amount of serum for a child of four to five is 60 to 80 g.

Leucine and Tyrosine and Crystals Simulating Them in Urine (Salicylic Acid). Newcomet (*University Medical Magazine*, Oct., 1898) reports a case where microscopic groups of crystals in sheathes resembling tyrosine and also spheres like leucine were found in the urine. The man was taking salol and on testing the residue after extraction of the urine with ether, with ferric chloride it was seen to give the reaction of salicylates. The author believes them to have been salicylic acid, as they sublimed without the characteristic odor of amylamine given by leucine. The crystals obtained from the ethereal extract of the urine are shown to be salicyluric acid.

Remarks on the Kidneys in Cases of Cerebral Hemorrhage and Cerebral Softening. As a result of observations in four hundred and sixty-four autopsies on adults, C. A. Herter (*Medical Record*, Oct. 22, 1898) finds that cerebral hemorrhage is most frequent among persons with small granular kidneys, and least frequent in those having large kidneys. None of the cases of hemorrhage were associated with smooth kidneys, while those of cerebral softening had smooth kidneys and freely stripping capsules. When there was high arterial tension, the urine of low specific gravity containing very little albumen and few, if any, casts, the kidneys were small and granular, and such a condition in cases presenting cerebral symptoms point strongly to hemorrhage.

The Diagnosis of Nephritis without Albuminuria. Edwards (*American Journal of the Medical Sciences*, October, 1898) considers those cases of nephritis unattended by albuminuria. He cites several cases of his own, and quotes a number of authorities to prove that nephritis may exist without albuminuria. Casts are usually found in such cases. Stress is laid on the thorough examination of the heart in cases of nephritis. Cardiac and renal disease are often interdependent, and may be either primary or secondary to each other. Many authors, as Tyson, have remarked upon the lack of correspondence between the clinical and pathological findings in nephritis. Cantharidin produces an intense nephritis, attended by slight albuminuria, while mercurials produce slight parenchymatous changes with

copious albuminuria. Albumen may be absent even in amyloid nephritis. The conclusions arrived at by the author are as follows: Carefully repeated routine chemical and microscopical examination of the urine every twenty-four hours usually, but not invariably, detects acute and chronic nephritis. The diagnosis of the albuminuric and non-albuminuric types of the nephritides is aided by searching examination of other viscera and parts, *e. g.*, by disclosure of cardio-vascular changes, retinal involvement, etc. Nephritis may be unattended by albuminuria. Such nephritis is usually interstitial in type, of which cases abound in literature, yet acute nephritis and chronic parenchymatous nephritis may exceptionally occur without albuminuria. Casts should always be searched for; they are more constantly found than is albumen, yet they seem in certain instances to betoken renal degeneration rather than inflammation. Future clinical caution and pathological examinations will probably increase the number of cases of non-albuminuric renal inflammation of acute, subacute and chronic types. Non-albuminuric nephritis is of special importance in life insurance and kindred examinations and in practice, since prophylactic measures may be instituted and the prognosis obviously influenced. A. R.

The Albuminurias of the Period of Development—Puberty. Springer (*Med. Times*, Oct., 1898) is of the opinion that during the development of the organism, the kidneys, in conjunction with the other parts of the body, have an extra amount of work to perform, and whenever preceding lesions or defects are present they may undergo pathological alterations which are accompanied by albuminuria. He divides clinically all the albuminurias of childhood and puberty into: 1. Albuminuria of the newborn, due to renal infarcts of uric acid, incomplete development of the epithelium covering the glomeruli or to venous stasis. 2. Hereditary albuminuria. 3. Toxic albuminuria, largely due to the chronic lead poisoning to which children are subjected in cities where the water is in contact for a long time with lead pipes. 4. Cyclic albuminuria in children of arthritic parents. 5. Pretubercular albuminuria which depends on the irritation of the kidneys produced by the toxines. It is usually observed at the end of puberty and is generally intermittent, appearing in the morning. 6. Albuminuria from arterial aplasia, dependent on abnormal narrowness of the arteries. 7. Albuminuria of puberty in chlorotics, produced, according to Charrin's theory, by auto-intoxication. 8. Albuminuria in growing fevers. 9. Albuminuria in the fever of over-exertion, such as bicycling, running, rowing, etc. 10. Phosphaturic albuminuria accompanying rhachitis, dilatation of the stomach and chorea. 11. Albuminuria of late hereditary syphilis. 12. Albuminuria of amyloid degeneration, often noticed during the period of development. 13. Albuminuria in children with adenoid vegetations. These obstruct the nasal cavities, impede respiration and lead to a lesser assimilation of oxygen, thus leading to retention and development of micro-organisms. 14. Albuminuria of de-

velopment in dyspeptics. This form is dependent on the disturbance of the gastro-intestinal and hepatic functions so frequent in puberty. 15. Thyroid albuminuria produced by some pathological condition of the thyroid gland. 16. Residual, partial and cicatricial albuminuria such as follows the infectious and eruptive fevers. All these forms of albuminuria are quite amenable to treatment. The kidneys of children, while easily affected by toxic substances, rapidly eliminate them. The author finally concludes that puberty of itself is not a cause of albuminuria.

DERMATOLOGY.

UNDER THE CHARGE OF
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AND
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Treatment of Ringworm of the Scalp. H. Lyle (*Lancet*, Oct. 8, 1898) adopted a new treatment for chronic cases of ringworm which is especially useful to the country practitioner. The head is entirely shaved and kept so. Each patch is scraped with a Volckmann's spoon, and then, by means of a piece of cotton wool rolled round the end of a glass rod and tied there, a solution of silver nitrate, a drachm in an ounce of alcohol, is applied and well rubbed in. This turns all the places of application black. The application is made twice a week, and after removing the black layer each time (which comes off easily) the underlying parasitic growth is scraped with the spoon before repainting. The smarting after its use is slight and lasts only a short time. Oleate of mercury, 5% in oil, is then rubbed into the head night and morning. Sometimes it may be necessary to paint the entire scalp. As the diseased areas become smaller the strength of the solution is increased to two drachms to the ounce. The author is of the opinion that the solution, in addition to the destructive effect of the nitrate of silver on organic matter, acts by depriving the growth of air.

Impressions and Conclusions Based upon a Study of 5,000 Cases of Skin Diseases Treated During the Year. C. W. Allen (*Med. Rec.*, Oct. 22, 1898) in his report read before the American Dermatological Association points out the more striking features and the treatment employed in the various skin diseases during the year. Acute varioliformis, of which nine cases are reported, was treated with unguentum hydrargyri ammoniati with most excellent success. In alopecia areata formalin solution used even up to the full strength acted well in several instances. Erysipelas was treated by thorough intranasal swabbing, upon both sides, with a 40 per cent. watery solution of ichthyol. Ichthyol collodion was

applied over the skin. In some instances the adhesive band was applied about the forehead. Erythema multiforme, which always presented an elevation of temperature ranging from 100° to 101.5° F. (a symptom not always mentioned in the books) is often associated with digestive defect and is of infectious origin. Intestinal antisepsis is the most efficient cure in these cases. In the treatment of zoster the lesions were varnished with a 3 per cent. methylene blue in collodion with excellent results. The latter proved also efficient in impetigo. One case of lupus erythematosus was cured by electrolysis. Psoriasis was treated with anthrarobin and chrysarobin ointments and combinations with collodion with good results in the majority of cases. In scabies dry powdered sulphur was found most efficient. Syphilis was treated by intramuscular injections with better results than usually follow any other plan of treatment. Chrysarobin dissolved in ichthyol, or, better still, a strong solution of formalin, had a marked curative effect on tinea circinata, but the formalin should be applied by the physician himself. Warts were best treated by acetic acid; 1, sulphur; 2, glycerine; 3, or salicylic acid with acetic acid and cannabis indica in collodion; or trichloracetic acid.

PEDIATRICS.

UNDER THE CHARGE OF

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In an Article on Melæna Neonatorum, Dr. G. Rheiner (*Corr.-Bl. für Schweiz. Aerzte*, No. 17, 1898), after reviewing at length the numerous theories advanced in explanation of this rare disease, points out with good show of reason that the condition is really but a symptom which may appear in the course of various pathological processes. True melæna, which must not be confounded with the spurious forms caused by purely external and accidental factors, fissured nipples, operations in mouth and throat, etc., is extremely rare (14 cases in a series of 13,711 births, or .1%), and accordingly not well understood. The mortality in all forms of hemorrhagic disease in the newborn is high, 62% to 79%, according to Townsend. Experiments by the same author to produce the disease in animals by inoculation were attended with negative results. Rheiner describes a case under his care which terminated fatally on the fifth day after birth. The infant, a fairly well-nourished girl, born four weeks after term, very anæmic, with weak, thready pulse. No cyanosis; internal organs and umbilicus normal. No history of hemophilia or tuberculosis. Bloody

stools began six hours after birth and increased in frequency every day until death occurred with collapse on the fifth day. They ranged in quantity from a mere stain on the diaper to a tablespoonful. No hæmatemesis. At the autopsy no sign of a thrombus could be found in the heart, nor was there any lesion in any part of the alimentary tract with the exception of a small ulcer in the duodenum. No eroded blood vessels could be detected, although careful search was made with a loupe. The occurrence of melæna neonatorum without ulcerations in the intestine is established beyond a doubt. Syphilis may give rise to hemorrhages in the intestine, as in other parts of the body, and the action of bacteria suffices to produce grave hemorrhages, as in jaundice and fatty degeneration of the newborn and the like septic processes. There are cases of melæna neonatorum in which *no adequate pathological cause for the hemorrhages can be demonstrated.* The author adds that true or pathological melæna neonatorum may be due to various diseases in various parts of the body. The basic disease may have existed for some time and be, in fact, well known, whether it be located in the nose, stomach, intestine or elsewhere. No good purpose is served by describing a mere symptom as a separate disease and treating it as such in text-books on children's diseases; the term melæna neonatorum should therefore be discarded altogether, as it gives no information about the true nature of the disease.

THERAPEUTICS.

UNDER THE CHARGE OF
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The Action of Phosphorus on Nutrition. In his studies which Germain reports in his thesis (*Thésé de Lyon*, 1898), he found that this drug, if employed with discretion comparable with its extreme energy, is very beneficial and gives good results in rhachitis, osteomalacia, pulmonary tuberculosis and in certain chronic affections of the nervous system. In all of these diseases he found marked improvement in the general nutrition, with an almost constant increase in the amount of urine and the percentage of urea. In the tubercular the patient's digestion and assimilation were improved, producing an increase in weight and in the products of oxidization with an added favorable action upon the expectoration and night sweats. In a further study of this particular result he administered one one-hundred-and-fiftieth part of a grain in oil, in a capsule given at bedtime, increasing the dose to two capsules at the end of four or five days. He always found a marked decrease in the amount of night sweats and some-

times its complete cessation. The drug should be suspended from time to time to prevent the production of a cumulative action.

An Eruption Resembling Measles Produced by Sulfonal. M. Burgess (*L'Union Medical du Canada*, 1898) reports a case presenting, after the use of sulfonal, an eruption resembling that of measles so closely that it might easily have been mistaken for the latter.

The Alternating Administration of Drugs by Rotation as a Practical Principle of Treatment. William Ewart (*Brit. Med. Jour.*, Oct. 1, 1898) emphasizes the importance of not pushing the administration of any one drug for a very long period. He points out that certain drugs, especially stimulants and sedatives, lose more and more their effect the longer they are taken; and that certain other drugs have a cumulative action and for that reason should not be long continued. After a short rest a drug may often be again administered with as much efficiency as at first. Ewart pithily sums up this matter by insisting that there should be rotation in drugs as well as in crops. B. R.

Tuberculin. McCall-Anderson (*British Medical Journal*, No. 1970) thinks that this valuable discovery of Koch has been cast aside and its usefulness overlooked, because it did not cure all cases of tuberculosis, but he believes that it has its indications, and if it were used by conservative physicians in selected cases, good results would be obtained. He advises its use: (1) As a diagnostic test. (2) As a means of discovering additional foci of disease of which there is no evidence whatever at the bedside. (3) As a curative agent. On account of the cost, it has been out of the reach of many, but in the future the production may be cheapened and then it will be more universally used. He mentions cases to illustrate the above points.

Poisoning from Headache Powders. Greenleaf (*Boston Medical and Surgical Journal*, Vol. CXXXIX., No. 15) reported before the Clinical Section of the Suffolk District Medical Society, that a woman, forty-eight years of age, took five headache powders, each containing three grains of acetanilid, two grains of phenacetin and some caffeine. At the time of observation, she was deeply cyanosed, pulse and heart weak, and a few râles were heard over the chest, due to a chronic bronchitis. Urine was normal. The diagnosis was difficult on account of her weakened condition, she being too prostrated to give an account of herself. Aromatic spirits of ammonia were given, which gradually restored her strength. The cyanosis disappeared slowly, and was completely gone the following day. The author thinks the symptoms were chiefly produced by the acetanilid, which is a more dangerous drug than phenacetin, and should be used in all cases with care, both internally and externally. The toxic dose of acetanilid, he says, is about twenty grains, that of phenacetin, thirty, while that of

antipyrine is ninety. Idiosyncrasies and special conditions modify this estimated dose to a greater or less degree. [Much smaller doses than those mentioned above would be dangerous in persons whose hearts are not entirely sound and strong. W. S. N.]

Case of Bromoform Poisoning. Glazebrook (*Nat. Med. Rev.*, Sept., 1898) reports: A child four and one-half years old developed pertussis. She was given three drops every three hours of a fresh preparation of bromoform, which was continued for three weeks. Paroxysms, never severe, were improving, although three or four occurred during the twenty-four hours. The child, after taking the regular three-drop dose of the medicine, got hold of the dropper and emptied the contents, about fifteen drops, in her mouth. Ten or fifteen minutes later she was apparently asleep; at midday could not be aroused, was limp and unconscious, though breathing quietly. Involuntary evacuation of bowels and bladder had taken place. The white of an egg was administered and the child vomited twice. On the arrival of the physician a few minutes later he found her collapsed, cyanotic and apparently dead. After drawing the tongue forward and swabbing out a large quantity of mucus he used artificial respiration. Nitro-glycerine and atropine sulphate, $\frac{1}{12}$ grain, were administed hypodermically. Anæsthesia was complete; conjunctival and other reflexes abolished; pulse from 160 to 200; respiration regular. Stomach was emptied with stomach tube and strong coffee introduced. Whiskey was given by enema and external heat applied. The atropine was repeated and the child lay quietly sleeping. At 4 P. M. she awakened and begged for food. During the toxic stage the symptoms resembled the narcosis occasionally seen in chloroform administration. The cyanosis was like that caused by nitrous oxide gas. The child has never manifested any symptom of pertussis since. The author, in conclusion, says that he has found that bromoform is not as efficacious in whooping cough as some other plans of treatment, as the disease in his cases appeared to run its usual course, in spite of the fact that the drug was carefully used for three continuous weeks.

Ipecacuanha in a Case of Epilepsy. Bond (*Lancet*, Sept. 17, 1898) reports a case of epilepsy treated successfully with increasing doses of ipecacuanha, after having been under treatment for years in hospitals. Beginning with ten minims, the dose was gradually increased to forty minims three times a day. The severity and frequency of the fits diminished under this treatment until May 3, 1898, one year afterward and since then none have occurred. The patient has never enjoyed so long an immunity from fits at any previous period since their commencement. The reasons which led Dr. Eddowes (under whose care the patient was) to adopt this treatment were based on his observation as to the value of ipecacuanha in convulsive attacks of children apparently due to gastro-intestinal irritation;

and that it promised to check the voracious appetite and neglect of mastication so frequently observed in epileptics.

A Case of Perineal Abscess; Pyæmia Treated with Anti-Streptococcic Serum: Recovery. Mr. Lawford Knaggs (*Lancet*, Sept. 17, 1898) reports this case: Man, forty-three years old, with a perineal abscess of unusual size, which formed a prominence in front at the root of the penis and had burrowed into both ischio-rectal fossæ behind. Treatment with the anti-streptococcic serum was employed; 10 cc. were injected over the abdomen. The same doses were repeated, every day but four, for fourteen days. It never caused any untoward symptom beyond the pain due to the large quantity of fluid injected. In fifteen days from the beginning of the treatment the patient was convalescent.

The Pharmacology of the Alkaloids of Aconite (A. Napellus). Theodore Cash (*British Med. Journ.*, Oct. 8, 1898) thinks that the uncertainty of aconitine is due to the mixture with the other alkaloids of aconite, which differ to a great extent in potency and physiological action. The difference in the lethal dose is shown by the following table:

	Rabbit.	Frog.
Aconitine,	0.00012g.	{ 0.000586 March. { 0.0014 July.
Benzaconine,	0.0272g.	0.284.
Aconine,	probably 0.28g.	1.055–1.75g.

pro. kilo body weight. Aconitine is about 200 times as toxic as benzaconine, and 2,000 times as toxic as aconine. The aconitine, in small doses, slows and steadies the pulse, with a slight decrease of pressure; benzaconine has a like effect, in a much more marked degree, while aconine lacks this property. The first produces the characteristic tingling of the mucous membrane and impairs sensation generally by its action on the peripheral sensory nerves. The other two have no such action. They all have a bitter taste, but the last is not so marked. Death from aconitine is primarily due to respiratory failure, although in small doses it at first stimulates the respiratory center, then finally depresses it by paralyzing the sensory fibers of the pulmonary vagi. Benzaconine acts much like the above, except that it has very little effect upon the sensory nerves, while it depresses the motor group and also the muscle fibers. It also lacks the antipyretic action of aconitine. Aconine is not such a cardiac depressant as are the two others, but actually strengthens the heart and opposes the asequence and incoördination which aconite produces upon the motor system; it is a decided depressant and acts like curare.

A Case of Fatal Subacute Sulfonal Poisoning. Otto Wien (*Berl. klin. Woch.*, No. 39, 1898) reports the case of a woman, 32 years old, who was treated with moderate doses of sulfonal for a period of thirty days, when

suddenly she was seized with pain in the abdomen and severe vomiting. On the second day she developed paralysis of the muscles of the arm and neck. On the third day diarrhœa followed by weakness, gradually extending paresis. Catheterization was necessary. The urine for the first time contained albumen. On the tenth day complete paralysis. On the following day dyspnœa, cold perspiration, weak and rapid pulse (112–120), finally cardiac failure. Autopsy revealed toxic nephritis, myocarditis and cystitis. From this case Wien draws the conclusion that sulfonal has a cumulative action, produces marked changes in the blood, depresses the heart and paralyzes the motor nerves. The urine may be normal and cannot, therefore, serve as an indication of poisoning. A. R.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF
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ASSISTED BY
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Some Observations on the Pathology of Moles. T. C. Gilchrist in a paper read before the American Dermatological Association (reported in the *Boston Med. and Surg. Jour.*, September 22, 1898), said that, according to the leading pathologists, moles are incomplete sarcomata—growths from the wall of either the lymphatics or the blood vessels. Unna stands alone in saying that the structure of a mole is derived from the epidermis, and, therefore, is of epithelial origin. Gilchrist said that he had excised a pigment mole from the abdomen of a child, and several also from adults. The mole from the child showed nests of cells in the epidermis. His own observations, therefore, confirmed the view held by Unna. From this it follows that, since the cells of the tissue forming the mole are of epidermal origin, the malignant growth of such a tissue must be carcinoma. In this view Dr. Welch concurs. It must be borne in mind, then, that the malignant growth of a mole is not a melanotic sarcoma, but a carcinoma. Dr. Abel, the author said, had recently shown that the pigment in the negro is a very complex body, and that a granule remains after isolating the pigment. This granule contains iron. The pigment, when separated, is found to be free from iron. The conclusion is, that the pigment in melanotic growths and in the negro's skin is not derived from the blood, but alterations in the protoplasm itself. Certain Italian observers claim that the bodies found in cancer are blastomyces and are allied to the yeast fungus, but these bodies are not constantly present, and they are found in benign growth and in many other lesions of the skin. Moreover, no pure culture has been obtained from cancer, and attempts to reproduce undoubted cancer from the supposed parasite have so far proved

unsuccessful. Dr. Gilchrist, in closing the discussion, touched on the question of prognosis. He stated that early and complete excision before the occurrence of metastasis should effect a cure. He could not understand how there could be a mixed tumor, as all the cells in a mole are of epidermal origin.

Tuberculosis of the Mammary Gland. Warden (*Medical Record*, Oct. 1, 1898) has made a study of this rare condition, and reports the finding of fifty-eight authentic cases in literature. Eighty-nine and six-tenths per cent. of the patients were females. Most cases developed between twenty and twenty-five years of age. Park reports a case in a girl twelve years old. Warden's reported case is in a patient of forty who had passed the menopause. There is commonly a history of tuberculosis in the family. The disease may be primary by infection through the milk ducts or fissured nipple; may be secondary, extending from some contiguous focus, or through the lymph channels, or blood supply. The axillary lymphatics are enlarged in three-fourths of all the secondary cases and there may be a chain of lymphatics between the infected area in the gland and the maxillary glands. Adenomatous and carcinomatous tumors occasionally become tuberculous. The histology of the lesion in the mammary gland is not different from tuberculosis elsewhere. Caseation seems to be delayed, often not appearing for five or six years. Pyogenic secondary infection is common, and obstinate fistulæ occasionally develop. The symptoms are pain and tumor. Shattuck's case was painless. This is the exception. Commonly pain is the first indication of the disease. The pain is sharp and lancinating, and radiating to the arm. There is a constant sense of uneasiness and weight in the gland, which is extremely sensitive to pressure. The overlying clothing not uncommonly causes discomfort. The tumor may consist of one or more nodules, firm and hard, and freely movable with the gland. The nipple may be retracted. The skin at first is freely movable over the tumor, later it becomes adherent and undergoes the same changes as noted in the skin overlying tubercular cervical lymphatics. The proper treatment is excision. Where the lesion is primary the prognosis is good. The article is followed by a list of references.

On the Dissemination of the Tubercle Bacillus in Coughing. Curry (*Boston Medical and Surgical Journal*, Oct. 13, 1898, p. 368, discussion, p. 371) reports the observations of Flügge and Cornet, and adds to their observations and conclusions the result of his own examinations of twelve cases. He calls attention to Cornet finding in the one hundred and eighteen dust samples from hospital wards and rooms, forty samples which produced tuberculosis in inoculated animals. From the dust of twenty-one medical wards he found fifteen samples which contained virulent bacilli. Flügge, on the other hand, calls attention to the danger of minute droplets of sputum, ejected during violent fits of coughing. Laschtschenko finds

that similar droplets were ejected in the act of sneezing and loud talking. He further found that bacteria might be, under such circumstances, transmitted to a distance of ten meters. "Flügge concludes 'that coughing of phthisical persons can contaminate the air around them with these flying droplets, which can cause tuberculosis in others.'" The danger is greatest in those who cough violently with widely open mouths. Curry finds that the bacilli ejected in this manner are most numerous in the early morning hours. Like Flügge he finds that patients coughing with widely open mouths discharge the most infected droplets. In addition to the danger which exists in the surrounding air, Curry calls attention to the fact that wherever these droplets settle they may give rise to the same dangers ordinarily found in dried sputum. The prevention of the danger lies in having the patient cover the mouth with a handkerchief, preferably of Japanese paper, during the fits of coughing. These Japanese-paper handkerchiefs are also used to receive the sputum during walking, and at other times when a spit-cup containing disinfecting solution is not available. The soiled handkerchief is placed in a rubber tobacco bag. Upon returning to the patient's domicile, the soiled handkerchief is burned and the tobacco bag disinfected. Flügge (*Deut. Med. Woch.*, Oct. 14, 1897) maintains that the dangers of dried sputum have been greatly exaggerated, and doubts the possibility of dried tubercle bacilli reaching the lung and inducing tuberculosis in the normal organ. He urges the danger of inhaling the vaporized moist sputum.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF
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Ocean and High Altitude Health Resorts. Dr. A. N. Bell (*The Sanitarian*, 1898) holds that recent knowledge of microbic life justifies the inference that the benefit to consumptives derived from sea voyages or from high altitudes is independent alike of the extreme density and moisture of the air in one, or of rarefaction and dryness in the other. Both are inimical to microbic life, and are alike propitious and commendable to persons afflicted with or predisposed to pulmonary consumption. The special advantages of an ocean atmosphere are its entire freedom from the dust common to domestic conditions, and complete change of scene and rest, together with relief from all sources of excitement and worry.

Heliotherapy Founded by Diogenes. Sir Samuel Wilkes, in the *Practitioner*, announces himself as a follower of the cynic philosopher Diogenes.

He says: "The remedy for consumption is not medicine, but fresh air. In various parts of the globe this may be obtained. Seeing that all the places best fitted for consumptives are blessed with sunshine, it is quite possible that the latter may be one of the conditions favoring recovery; it may be directly destructive to bacilli, as the warmth and beauties of the landscape brought out by it indirectly excite the interest of the patient and revivify his nervous system. Air and sunshine are the needs of the consumptive; without them no other remedies will succeed. When reading at school of Diogenes in his tub, and the visit of Alexander the Great to him, I thought he was a man of very bad manners in telling the monarch to get out of his sunshine, and it was not until late years that I took a different estimate of the philosopher. After an attack of influenza I went to Worthing to convalesce, requiring air and sunshine. Everything was put aside for these; they were my only wants. When, therefore, I sat looking on the sea and basking in the sun, a friend stepped in front of me to talk, he was stripping me of my only shred of comfort, and I exclaimed, 'Get out of my sunshine.' I then discovered the greatness of Diogenes, who evidently knew that the sun was the source of all power."

Tuberculosis and Malaria Declining in Michigan. H. B. Baker, Secretary of the State Board of Health of Michigan, in an official letter speaks of the healthful condition of Michigan, which, he believes, is due to the influence of the Great Lakes, and especially proper sanitation. Thanks to the vigorous efforts of the State Board of Health for the last twenty-five years, the mortality from malaria and tuberculosis has been considerably decreased. Even the amount of sickness from malaria has undergone a substantial decrease, until at the present date a case of malarial fever is a rarity. In 1896 there were reported only 4.4 deaths to 100,000 population, or one death from malarial fever to 22,727.

SURGERY.

UNDER THE CHARGE OF

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Trauma a Cause of Appendicitis. W. B. Smith (*Med. Record*, Sept. 10, 1898), from the observation of a number of cases and the study of those reported in literature, concludes: 1. That the general prevalence of catarrhal conditions of the bowels, perhaps as an accompaniment or result of the grippe, is responsible for a large part of the general increase in the prevalence of appendicitis. 2. That accidental injuries, strains and work demanding strong contraction of the abdominal muscles

may be held accountable for the greater prevalence of the disease in males. 3. That such injuries and strains act by forcing material, loaded with the bacteria which produce appendicitis, from the cæcum into the vermiform appendix. That in consequence of the irritation from such material or from some other cause, these germs here find a favorable soil for their multiplication and development. 5. That in common with other germ diseases a time of incubation must elapse (for the multiplication of these germs) before symptoms sufficiently marked to prove characteristic of appendicitis can appear. 6. That the disease is of growing medico-legal importance, as many cases are of traumatic origin and may therefore give rise to proper suits for damage or valid claims against accident insurance companies.

The Relation of Phosphaturia to the Treatment and Prognosis of Fracture. After studying chemically the elimination of phosphates during health and during the process of repair after fracture of the bone, J. L. Howell (*Med. Rec.*, Oct. 15, 1898) draws the following conclusions from the results obtained in a series of cases: First, that during the course of a separative process after fracture there is an increased elimination of phosphates amounting to a decided phosphaturia. Second, that there is a large increase of the earthy salts in comparison with the alkaline. Third, that as the fracture is repaired and the patient is in condition to resume free occupation this phosphaturia is less marked, and the earthy salts resume their normal relation to the alkaline. The author believes that a more thorough study of the subject would lead to data that would tell when a bone was properly united and would give the key to the administration of hypophosphites in cases where refracture or non-union might be expected.

Schleich's General Anæsthesia Not a Success. His personal experience in a large number of cases leads H. Rodman (*Med. Rec.*, Oct. 1, 1898) to look unfavorably upon this new anæsthesia mixture, although the favorable reports which followed its introduction into this country had led to the hope that it would obviate some of the unpleasantness and dangers attending the administration of ether or chloroform. He has not found it less free from danger than either of the other anæsthetics. Has seen dangerous cyanosis and syncope. Has found the same harmful effects upon the lungs and kidneys and proved it to be a respiratory and cardiac depressant. Its only advantage is that it is pleasanter to inhale. It is not safe in heart lesions, for it was shown that a sound heart can be so depressed by its action as to greatly endanger the patient's life. These poor results have caused the withdrawal of the mixture almost entirely from the hospital where the results were observed.

Excision of the Brachial Plexus for Neuralgia. W. W. Bostwick (*The Med. Record*, Sept. 10, 1898) reports a case of severe neuralgia following an injury which necessitated the amputation of the arm in the up-

per third. Excision of the bulbous terminal ends of the nerves in the stump produced no relief, and the brachial plexus was excised, leaving the origin of the long thoracic. Some pain persisted after the operation, until the removal of a tightly drawn suture showed the cause to have been trivial in nature. Since the complete healing of the wound the patient has been entirely relieved from pain and has gained flesh and strength.

The Protective Value of Cauterization. Cohn, of Berlin (*Med. Press*, Oct. 5, 1898), has shown the value of cauterization as a means of averting the local effects of infection by bacteria. Experimental inoculation, with subsequent cauterization by nitrate of silver, showed that the survival of the cauterized animals was due to the immediate destruction of the infected organisms, as those that were not cauterized died with the symptoms characteristic of the bacillus employed. Moreover, the blood of the non-cauterized animals showed the bacillus, while the blood of those cauterized was entirely free from them. Experiments with other bacilli were equally confirmatory, the whole series of experiments proving the scientific value and rationale of the time-honored custom of cauterizing the bites of dogs suffering from rabies.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

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Death from Impaction of Meat in the Pharynx. T. N. Kelynack (*Med. Press*, Sept. 7, 1898) thinks that in cases of sudden death, where the history gives no clue as to the cause, the larynx and pharynx should be carefully explored for any foreign body. He reports three cases in which after sudden death autopsy revealed quantities of meat impacted in the pharynx.

Turbinotomy. R. P. Lincoln, of New York (*British Medical Journal*, No. 1,924, 1898), in describing his method of turbinotomy recommended the strictest antiseptic precautions. In all nasal operations he urges the necessity of strict antisepsis of all instruments and the hands of the operator; also, that the nose shall be sprayed with an alkaline wash three times a day for one or two days preceding the operation, followed each time by a spray of the bichloride of mercury, 1:3000 or 1:5000. After operations which leave fresh surfaces he recommends a spray of iodoform in ether. [NOTE.—All precaution should be taken to prevent

infection, and, while the nasal membrane may be rendered fairly aseptic, the difficulty lies in maintaining such a condition, as the membrane is a secreting one and the condition is constantly changing.] His methods for reduction of turbinals are divided into two classes—chemical and surgical. The chemical are effectual in hypertrophies, hyperplasias and angioma without osseous enlargement. Of this class there are a great number, but by the judicious use of chromic acid, nitric acid, and the galvano-cautery, all can be accomplished that is possible by this method. In order to render an obstructed nostril patulous the scar must involve the periosteum so as to secure a freed point for anchorage, to which the surrounding soft parts containing the venous channels may be bound by the contraction of the connective tissue formed by the reactive inflammation. [NOTE.—Frequently the engorged and hyperplastic membrane lining the turbinate bone is the sole cause of the enlargement, and should be carefully differentiated from the cystic, or enlarged, turbinate bone.]

Enlarged Posterior Ends of Turbinate.—For the removal of enlargements which protrude from the posterior ends of the middle and inferior turbinates, the cold snare and ecraseur are convenient and most effective. [NOTE.—The alligator-jaw forceps or small double cutting saw are equally good.]

Bony Enlargement.—If the enlargement is chiefly bony, as much as is deemed necessary may be removed or mined out with a surgical trephine, thereby leaving intact nearly all the mucous membrane. [NOTE.—The mucous membrane should be carefully dissected away from the bone to be removed and allowed to cover, as far as possible, the necessitated scar.]

Bony and Hyperplastic Enlargement.—When it is necessary to remove bony and hyperplastic tissue in the same case, an incision is made down to the bone with a bistoury, whose blade is at an angle with the handle, a little below the line at which it is to be severed, a flap dissected up, the bone partly sawn through; then the upper cutting blade of a pair of bone forceps is inserted in the groove made by the saw and the lower blade pressed under the free edge of the turbinate, with a strong closure and at the same time an inward rotation of the instrument that portion within the grasp will be removed. In like manner extending backward until as much as is necessary has been removed.

Drainage.—To facilitate drainage, and at the same time prevent obstruction of the nostril from the congestion following, a fine roll of iodoform gauze is inserted. [NOTE.—Equally efficient is the use of a small perforated silver tube, which makes slight pressure and permits free breathing.]

Contributions to the Treatment of Adenoids. Dr. Jaquet, first assistant at the clinic of laryngology of the St. Pierre Hospital, Brussels, Belgium (*La Presse Med.*, Belge), says that though adenoids are frequently found

in adults, it is not necessary to look for them in old people. He reports a case that he operated on in a woman aged forty-five years; Mr. Delstanche also reports one in a woman aged forty-two years. When they are found in children he does not hesitate to operate, though their size does not always cause as much trouble as it would indicate. Medical treatment is absolutely useless and only loss of time. The method of massage through the nose is useless, although Dr. Jousset claimed that by this way they were reduced in size, headaches were diminished, respiration improved, etc. Neither had he ever seen them removed by means of the nasal passage and neither was it necessary to touch the bleeding surfaces with iodide in glycerine after removal. The author declares that it is a delusion to think that the naso-pharynx can be antiseptisized as proposed by some operators. [NOTE.—It may be possible to render the field aseptic, but it is impossible to retain it in an aseptic condition.] As a summary for radical cure of adenoids he says their presence is dangerous and the danger is not proportionate to their size, consequently they should always be removed by the following method: The patient, if under fifteen years, is given bromide of ethel; with an adult cocaine is used. The instruments are antiseptic, but no preliminary preparation for the patient. [NOTE.—It is well to cleanse the naso-pharynx with an antiseptic alkaline douche.] Then with one scrape of the curette carrying a receptacle the greater part of the growth is removed; this is followed by an ordinary curette, after which comes the finger to scrape away any parts remaining and to rub the surface by the finger to help arrest the hemorrhage. After the operation no local treatment, general treatment only to avoid taking cold. There is no danger in giving bromide of ethel to infants, consequently he does not employ any other anæsthetic. [NOTE.—In the very young (first year of life) no anæsthetic is necessary, as the adenoids can easily be removed by the finger.]

OPHTHALMOLOGY.

UNDER THE CHARGE OF
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The Diagnosis of Foreign Bodies in the Eye by the X-Rays, and Their Removal by the Electro-Magnet. Ph. Valençon (*Gazette des Hôpitaux*, July, 1898) summarizes the recent French progress in the localization and extraction of foreign bodies in the eye. He describes and recommends Radiguet's method, which is by no means as efficient as the methods of triangulation suggested by Mackenzie, Sweet, Leonard, Davidson and other American and British ophthalmologists. The time-exposure necessary with Radiguet's apparatus is about eight minutes for the front view and six minutes for the profile. Two pieces of metal are fixed to the patient's skin, one over the eyebrow, at a definite distance from and in a line with the center of the cornea, and the other over the temple at a defi-

nite distance from and in line with the center of the eyeball (about 12 mm. back of the cornea). The skiagrams show the relative position of the foreign body to the two pieces of metal, and it can be readily located. As shown by Hürzeler's statistics of 315 cases, 64.85 per cent. of which were successful, the failures were mostly due to difficulties in precise localization. With the X-ray as a means of diagnosis Valençon believes the failures of magnet-extraction will be greatly lessened. Unfortunately American ophthalmic surgeons cannot speak so highly of the magnet in past experiences, nor so hopefully of its efficacy with the aid of the X-rays in diagnosis. In many cases in which the extractions have been reported successfully, the eyes have become blind, or irritable, eventually calling for enucleation. Valençon advises incision of the eyeball at a point nearest the foreign body rather than introduction of the magnet through a remote wound of entrance. The magnet should be left in position for a few seconds, and if necessary reintroduced several times. The Haab magnet is spoken of in laudatory terms.

Protargol in Conjunctivitis. Frederick M. Cheney (*Boston Medical and Surgical Journal*, Aug. 25, 1898). Protargol is favorably reported upon by Neisser, Alt, Darier and recently by Cheney. The latter made side-by-side comparisons of protargol and nitrate of silver. He says that by observation of its behavior in one hundred and thirty cases he is led to conclude that protargol possesses all the advantages of nitrate of silver and none of its disadvantages. A ten per cent. solution causes less discomfort than a one per cent. solution of the silver salt. A two to four per cent. solution causes no more irritation than a half grain to the ounce solution of zinc sulphate. Cheney hopes that protargol will generally supplant nitrate of silver, both in the prophylaxis and treatment of ophthalmia neonatorum. In ordinary conjunctival inflammation Cheney prescribed one-half per cent. solution, dropped into the eyes every three or four hours.

The Galvanic Current for the Treatment of Pterygium. Horace M. Starkey (*Journal of the American Medical Association*, Sept. 17, 1898) has had six years' experience in the treatment of pterygia by galvanism, nineteen cases in all, and about the same number in dispensary and hospital work. In every instance the pterygium has been reduced in size and in most cases the growth has been entirely checked, and in about half the cases the cure has been radical. The cases especially suitable are those of small pterygia not encroaching upon the cornea, and particularly the highly vascular variety. The ways in which the electricity acts upon the tissues are as follows: 1. It coagulates the blood in the vessels, thus stopping the blood current and causing the vessels to disappear. 2. It produces a mild adhesive inflammation of the sub-conjunctival tissues, thus forming a firm cicatrix between the conjunctiva and the sclera, so that the gliding of the former over the latter is prevented. 3. It destroys microorganisms in the tissues, so that, if the claims advanced by certain investi-

gators that micro-organisms are the cause of this disease should prove to be well founded, this treatment would still be rational. These effects are all produced by the positive pole when used as the active agent. When the negative pole is used we get solution and absorption of the submucous hyperplasia and of the thickened conjunctiva.

OTOLOGY.

UNDER THE CHARGE OF
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Report of a Case of Severe Hemorrhage Following Paracentesis of the Drum Membrane. J. F. McKernon (*Laryngoscope*, May, 1898) relates the details of this interesting case. It was that of a girl, aged thirteen, who, after jumping rope with her companions on the previous afternoon, had suddenly become conscious of a severe pain in her right ear. When she was examined the next day, the drum membrane was found bulging at the lower and anterior portions, and a dark blue or purplish discoloration was present. The ossicles were entirely obscured. Being accepted as a simple case of acute otitis media, the canal was thoroughly cleansed and an incision made in the most prominent portion of the drum—the antero-inferior and the lower half of the antero-superior quadrant. Before the knife could be withdrawn from the speculum there was a gush of bright arterial-looking blood. It spurted directly outward for nearly two feet, deluging both the patient and the operator. Packing with cotton and afterward with iodoform gauze proved equally valueless in checking the hemorrhage, and it was not until it was noticed that the flow of blood was synchronous with the radial pulse, and pressure was made upon the corresponding common carotid artery, that the flow began to diminish. After a repacking of the canal with gauze, and an hour's continuance of firm pressure over the carotid, the hemorrhage finally ceased. There was no recurrence when the packing was removed a couple of days later. The blood was probably arterial, but its actual source could not be ascertained.

Operative Interference on the Drum and Ossicles in Chronic Middle-Ear Suppuration. Arthur H. Cheatle (*The Practitioner*, Sept., 1898) has collected the opinions of quite a number of the more prominent otologists concerning the value of operative interference in the class of cases refered to in the title of his paper. It is a very valuable compilation of views that are based upon extensive personal experience. Of course, there is inevitably more or less difference of opinion as to the particular cases in which operative measures should be adopted, and as to the time at which they should be carried out. The consensus, however, is overwhelmingly in favor of this method of treatment. Among the Englishmen quoted are

Dalby, Pritchard, Hovell, Law, Shield and Milligan. The French are represented by Gelle, Loewenberg, Luc, Moure, Lermoyez and Miot, and the Germans by Politzer, Zaufal, Hartman, Betzold and Kirchner. The three Americans are Dench, Knapp and St. John Roosa.

On the Relative Frequency of Affections of the External, Middle and Internal Portions of the Ear. Biehl (*Archiv. f. Ohrenheilk*, Band XLIV., Heft 4) bases his paper upon the examination of a large number of young men between twenty-one and twenty-five years of age, all soldiers in the Austrian army. He shows that soldiers are much more exposed than other individuals to affections of the external ear and of the tympanic membrane.

GYNECOLOGY.

UNDER THE CHARGE OF

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Vaginal Cancer and Vaginal Extirpation. L. Kessler, of Dorpat (*St. Petersburg. med. Wochenschr.*, No. 34, 1898), says the prognosis of carcinoma of the female genital tract is bad. A collection which he made some years ago showed that but seven per cent. definitely recovered; the prognosis of vaginal cancer is still worse. Of eighty-four cases of primary disease from the *Frauen Klinik*, Berlin, but sixteen were found operable, and of these only one remained free of relapse at the end of two years. The reasons for the unfavorable results in vaginal cancer are found in the anatomical relations as follows: First, the vaginal wall is very thin, with a muscular structure which affords no barrier against the extension of carcinoma, consequently vaginal cancer makes rapid progress, which is promoted by the numerous lymph spaces in the surrounding paravaginal cellular tissue. As this tissue affords but little resistance the symptoms are trifling, so that the condition remains unsuspected until hemorrhage or characteristic discharge attracts the attention of the patient to the condition, and primary cancer is discovered too late to receive radical treatment; second, an etiological factor in the relapse of this particular form of cancer exists in the fact that small foci exist at some distance about the point of original infection which are unnoticed in the operation, and in a very brief time cause a redevelopment of the scar; third, the fingers of the operator and the instruments convey cancer germs during the progress of the operation and these remaining in contact with the wound are nuclei for relapse. To avoid these methods of infection

Olhausen devised a procedure by the rectum from the recto-vaginal septum. Transverse incision of the septum was made. Through this one worked up by blunt dissection between the rectum and vagina to the junction of the posterior vaginal wall and cervix. Dissection was extended laterally until the new formation was completely separated. The further separation of the already loosened cancer is then completed with scissors. If the uterus is to be removed with it after the separation of the posterior and lateral vaginal walls from the wound cavity, Douglas' pouch was opened, the uterus turned down, the ligaments external to the tubes were progressively ligated and then the borders of the loosened part of the vagina cut away with scissors so the cancer was separated. In a very narrow vagina or where the space is limited by the new formation, the excision of the latter can be enlarged after separation of the vaginal wall from its under surface, by splitting the frenulum in a sagittal direction in the neighborhood of the new formation. In the last of Olhausen's three operations by this procedure a not inconsiderable hemorrhage continued for almost two hours, because the relations referable to the bladder were difficult and the ligated ligament still occasioned considerable irritation. Between this operation and its publication only a month transpired, so nothing could be said regarding the duration of the result. The first patient showed, after three years, an inoperable relapse; the second such after three months. The immediate impression of this operation is that it is not very difficult. The opening into Douglas' pouch and the vesico-uterine excavation occurs after complete separation of the vagina from the rectum and bladder and secures as well the extirpation of the uterus. The great advantage of this method, security of complete removal of the disease, if we first, from behind the entire body of the cancer, undermine and undertake its separation, within healthy tissue with scissors.

Choice of Methods in Hysterectomy. Ernest W. Cushing (*Annals of Gynecology and Pediatry*) discusses the various methods of performing hysterectomy. The extra-peritoneal treatment of the stump has been practically abandoned unless under exceptional circumstances. In suprapubic amputation of the uterus he unites the flaps of the cervix with continuous catgut sutures. Whenever the operation is performed for malignant disease the extirpation should be total; when the cervix itself is diseased, eroded or secretes profusely unhealthy mucus or pus, it is better to remove it; or when this is removed with the tubes for tubercular conditions or gonorrhœal disease involving its mucous membrane so that there is presumably an infectious condition of the secretions, it is better to perform total extirpation, as it provides for drainage. Cushing considers it necessary to have much greater dexterity, experience and resource to perform vaginal hysterectomy in really the best manner in difficult cases than to operate by abdominal incision. The advantages claimed for the vaginal method are: less danger of hernia, absence of cicatrix in the abdominal wall, less time

spent in the operation and less shock. On the other hand, the abdominal operation has solid advantages founded on great principles of surgery and can never be shaken; for it gives greater certainty of diagnosis, greater facility to work by sight, the possibility of recognizing and overcoming unforeseen complications, greater security against wounding intestines and ureters, and better control over hemorrhage. He condemns the method of removing the uterus without using ligatures, believing this too risky to make it a practical procedure.

De l'Hysterectomie Vaginale Totale dans le Prolapsus Uteri. M. Longuet (*Gazette des Hôpitaux*, Sept. 27, 1898) divides the operations of vaginal hysterectomy into two classes: 1. Hysterectomy with preventive hemostasis often with morcellement (extirpating the uterus in many fragments). 2. Hysterectomy without preventive hemostasis and without morcellement (extirpation in one or two fragments). He advocates the second method, particularly as performed by Quenu. The steps are as follows: 1. The vaginal incision. 2. The liberation of the uterus, separation from the bladder and rectum. 3. The lowering of the uterus and median hysterectomy. 4. Control of hemorrhage by ligation and removal of the two fragments of the uterus. Quenu condemns the use of clamps as he desires union by first intention. 5. Closure of the hernial opening. (*a*) Closing the peritoneal opening with a purse string or a continuous suture. (*b*) Approximation of the broad ligaments as a means of intra-abdominal support. (*c*) The formation of a vaginal vault. After the hysterectomy is complete he performs anterior and posterior colporrhaphy. The after-treatment consists in the use of vaginal tampons for the three weeks that the patient remains in bed. The catheter is used for 48 hours. The operation must not be performed unless the clearest indications exist. In these selected cases the mortality is almost nil and relapses very infrequent.

A Further Report upon Conservative Surgery of the Uterine Appendages. A. P. Dudley (*Amer. Gyn. and Obstet. Jour.*, Oct., 1898) reports two successful operations of resection of the tubes and ovaries in cases of suppurative disease of the appendages. Conservatism, although it saves some portion of the appendages, may be more dangerous or more radical than even a hysterectomy.

Cancer Musculaire de l'Ovaire. M. Piery (*Lyon Medical*, Sept. 25, 1898). At the Societe de Chirurgie de Lyon, M. Piery presented a tumor taken from the service of M. Gangolphe. A woman aged thirty-three had shown, six years before, the existence of an abdominal tumor the size of an egg, a little above the pelvic symphysis. It increased slowly in volume, and in three years began to cause painful symptoms after fatigue, Finally, for four weeks the patient had suffered severe, shooting pains. headaches, vomiting, and was confined to her bed. The tumor, now ap-

parent to the eye, occupied the left iliac fossa, being the size of an adult's head, hard and smooth. The diagnosis was uterine fibroma. The operation on January 29 showed that the tumor was attached, not to the uterus, but to the ovary. An uneventful recovery followed. The histological examination revealed a smooth muscular cancer (sarcoma) very probably of ovarian origin.

OBSTETRICS.

UNDER THE CHARGE OF
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The Bacteria of the Vagina. Williams (*American Journal of Obstetrics*, Oct., 1898) critically reviews all recent bacteriological investigations of the vaginal secretions of pregnant women, tabulates the results obtained in his own very careful study of ninety-two cases, and establishes the following conclusions: 1. We agree with Krönig that the vaginal secretion of pregnant women does not contain the usual pyogenic cocci, having found the staphylococcus epidermidis albus only twice in ninety-two cases, but never the streptococcus pyogenes or the staphylococcus aureus or albus. 2. The discrepancy in the results of the various investigators is due to the technique by which the secretion is obtained. 3. As the vagina does not contain pyogenic cocci, autoinfection with them is impossible; and when they are found in the puerperal uterus, they have been introduced from without. 4. The gonococcus is occasionally found in the vaginal secretion, and during the puerperium may extend from the cervix into the uterus and tubes. 5. It is possible, but not yet demonstrated, in very rare instances, that the vagina may contain bacteria, which may give rise to sapremia and putrefactive endometritis by autoinfection. 6. Death from puerperal infection is always due to infection from without, and is usually due to neglect of aseptic precautions on the part of the physician and nurse. 7. Puerperal infection is to be avoided by limiting vaginal examinations as much as possible and cultivating external palpation. When vaginal examinations are to be made, the external genitalia should be carefully cleansed and disinfected, and the hands rendered as aseptic as if for a laparotomy. Vaginal douches are not necessary and are probably harmful.

M. Budin (*Le Progres Medicale*, Sept. 17, 1898) points out the danger of the use of the curette and the placental forceps, and reports his success in the removal of the placenta in cases of abortion by "abdominovaginal expression of the uterus." The method which he has employed

for the past three years consists of the following: The placenta, having been freely detached from the uterine wall, is delivered either as a whole or in portions. To effect the latter the fingers of one hand are placed in the posterior cul-de-sac with palmar surface forward. These fingers are brought in contact with the uterine wall. The other hand is placed over the hypogastrium, and with the fingers hooked, is made to press upon the fundus and anterior wall. The uterus so pressed upon, is readily delivered of its contents.

Some Practical Remarks on the Obstetric Forceps: a Description of a Modified Simpson Forceps and also a Traction Instrument. D. Benjamin (*Am. Gyn. and Obst. Jour.*, Sept., 1898) called attention in an address delivered before the Philadelphia Obstetrical Society to the respective merits and demerits of various forceps. He finds that the long forceps are far more serviceable on all occasions than the short. Of the curved forceps, he claims, Simpson's are the only ones of real value, as they do not slip and are not likely to injure either mother or child. But the only disadvantage they possess is in the handle, which is much inferior to that in Hodge's forceps. The author, therefore, has modified Simpson's forceps by substituting Hodge's handles. This, the author claims, makes the instrument perfect. He also devised an instrument which gives axis-traction at any time during delivery. It can easily be applied and removed without removing the forceps. B. R.

Hyperemesis Gravidarum. Isador Fischer (*Klinisch-therapeutische Wochenschrift*, Sept., 1898) reports fully the course and treatment of several cases. The ordinary well-known medicinal agents are not discussed. The true cause of the vomiting being unknown, there is no one course of treatment that acts well in every case. Each must be carefully examined and the causes removed, so far as possible. Under prophylaxis are mentioned regulation of the diet and bowels; exercise and sleep. All predisposing influences should be removed. If the patient have gastric catarrh, Dimoser has cured his cases by lavage, employing a solution of boric acid and bicarbonate of sodium. In some cases gastric irritability is lessened by giving food in small quantities, at frequent intervals. Rectal feeding puts the stomach at rest and keeps up the patient's strength. Frommel, Rech and Schäffer recommend the use of orexin given in capsules gr. v and report a case in which the vomiting ceased and the patient improved in every way. Picard has obtained good results by the use of inhalations of oxygen. Acting on the theory that the condition is a form of toxæmia, the subcutaneous injection of a normal salt solution has been employed. Objections to this treatment were raised that, owing to lowered vitality of the patient, abscess formation followed. Frommel and Chazan have reported cases where the employment of suggestion has caused a cessation of this most obstinate condition. Chazan, by pointing out to his patient the dangers of abortion, which might have to be resorted to, should

the vomiting not cease, caused immediate cessation of the vomiting. Apostoli has demonstrated the value of galvanism. He employs from five to ten milliampères as the strength of his current. There are on record five cases of the successful employment of cocaine muriate by hypodermatic injection in the hypogastric region. In cases where there is found a perimetritis, a uterine displacement or a narrowed cervix, appropriate measures for the treatment of these conditions should be instituted. In the dilatation of the cervix, however, it should ever be remembered that abortion may be produced. Hence, Kehrer recommends this only in cases where all other causes have been looked for and treated if present. Tuszkai, by vaginal douches with hot sterile water, has cured some cases. La Torre reports cures by the use of ichthyo-glycerine tampons, in three cases where the os and cervical canal were unduly sensitive. After all these measures have been tried and found wanting, and when the vomiting persists, the pulse becomes frequent and intermittent, albumen appears in the urine, induced abortion is necessary to save the life of the mother. Fischer closes his article with a very complete bibliography of hyperemesis gravidarum.

Spontaneous Rupture of the Uterus During Labor. M. Treyman (*St. Petersburger med. Wochenschrift*, Aug., 1898) reports a case. The patient had had two abortions and six births each with some complication. The true conjugate was but 9 cm. Prompt measures for delivery of the child and suturing the uterus saved the mother's life. The small conjugate, together with extremely thin, poorly nourished uterine walls, was responsible for the accident. Treyman quotes Winckel's statistics on frequency of rupture of the uterus as follows: Collins, 1–482 births; McClintock, 1–737; Bandl, 1–1,200; Jolly, 1–3,403; Ramsbotham, 1–4,429.

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BOARDMAN REED, M.D.

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The Treatment of Constipation.

In this number of the INTERNATIONAL the treatment of constipation—one of the most prevalent and health-destroying of all the chronic ailments that affect modern civilized people—is ably discussed by Hans Leber, of Homburg, Germany, and Cornet, of France. Though their recommendations differ in some details, they agree with regard to most of the essential points. They both advise against the routine employment of purgative drugs and in favor of a large use of massage (especially of the abdomen) and hydrotherapy. They agree also in prescribing a coarse, laxative diet including much fruit, and Cornet advises adding freely of the sweets, particularly honey, syrups, and sugar of milk.

There can be no question as to the efficacy of all these things in overcoming constipation, and yet as to some of them, there are certain contraindications which ought to be mentioned. Dr. Leber, in his water-cure institute at Homburg, gives such close personal attention to all his patients, that he can easily adapt both the diet and the other forms of treatment to the exact needs and idiosyncrasies of each case; but physicians less skillful and less fortunately situated, would encounter difficulties in attempting to carry out the methods prescribed, unless informed beforehand as to these contraindications.

One of them is abdominal massage, which (as was first pointed out by the present editor of this journal, in a paper contributed to the number for January, 1898) tends to aggravate decidedly gastric hyperacidity and acid gastric catarrh. Since constipation is probably often dependent upon an excessive secretion of HCl in the stomach, the presence of this latter

condition in any case should prevent massage of the abdomen being given in the usual routine manner.

Much better known, especially to physicians who devote particular attention to the gastro-intestional tract, is the liability of very coarse foods and the more acid fruits as well as sugar, to act injuriously in cases of constipation that are complicated—as so very many of them are—with catarrhal processes either in the stomach or bowels.

Chronic catarrh of the upper intestine is one of the commonest causes of constipation, and these two conditions, when associated and of long standing, are very difficult to cure. Under ordinary medicinal methods, they are quite incurable. Massage given by the physician himself, or under his personal direction, with unusual skill, and with care to avoid the epigastric region in all cases of hyperacidity, aided by a bland and easily digestible diet, is the most effectual remedy. Next in order come gymnastic exercises for the trunk muscles, and hydrotherapy.

Cornet speaks more favorably of washing out the bowels by injections than does Leber, but it will be found that he does not advise the prolonged use of this method and recommends oil as the fluid to be used in preference to water.

Dr. Leber in personally discussing this subject with us last summer, protested emphatically against the modern fad of flushing the colon with large quantities of warm water as a method of evacuating the bowels. He insists that in his experience patients who have taken laxatives many years are not so difficult to cure as those who have used the copious high enemas for one year.

We have had a very similar experience in treating constipation and feel that it is time to utter an emphatic note of warning against a procedure which is becoming fashionable even among the laity in this country. Laxatives, used regularly and in the full doses usually self-prescribed, are bad enough, being capable of effecting in time great mischief; but the prevalent practice of washing out the colon daily, or two or three times weekly with several quarts of warm water (or several gallons as some of our patients have confessed to using) is much worse in the long run. There is no surer way of gradually paralyzing the muscular coats of the bowel, and besides its nervous apparatus is thus accustomed to an unnaturally powerful stimulus and after a time refuses to respond to anything else. Patients who have flushed their colons regularly for a year or two can rarely ever obtain a bowel movement in any other way, even the largest doses of active cathartics often failing. Moreover, from the start the practice lowers nutrition by washing away a considerable remaining portion of digested food which would otherwise be absorbed from the colon. Neuralgic or rheumatic

pains, nervous depression, headache, insomnia and other distressing effects of autointoxication, are sometimes magically relieved by these flushings, and in the hands of the physician they are a legitimate means of removing accumulations in the beginning of a course of treatment. In conjunction with massage, electricity and special gymnastics to strengthen the abdominal muscles and the peristalsis, they may even be made useful for a longer time, especially if the water be cool or cold, rather than warm, and be used in not too large quantities. But patients should never be allowed to depend upon them as a regular means of procuring evacuations. Constipation is in most cases a curable disease, but it requires much more than high enemas to accomplish the result.

The Modern Moloch.

If some fierce barbaric horde, like the Goths and Vandals of old, were in the habit of swooping down every year upon the civilized regions of North America, killing our people by tens of thousands and wounding from 50,000 to 100,000 more, all for lack of adequate defences, which would cost a few beggarly millions of dollars, what a howl of indignation there would be! How the press and platform and even the pulpit would ring with denunciations of the criminally apathetic authorities who permitted such an unnecessary sacrifice! Yet, would such a needless loss in battle be any more deplorable or any more criminal, than permitting the death or serious injury annually of the same number of people by the many diseases which we now know to be preventable? A rough calculation, based upon statistics given in a new book by John W. Hill (which is reviewed upon another page of this journal), shows that typhoid alone in the year 1896 caused upwards of 5,000 deaths in thirty-five American and Canadian cities, saying nothing of the deaths from the same cause in the smaller towns and country places. For every fatal case there were at least four that recovered, which would make 20,000 condemned to a long and trying illness, with persisting ill health in many of them, and there must in fact have been a considerable larger proportion of recoveries under our improved modern methods of treatment.

But the striking—one might even say startling—fact demonstrated by Mr. Hill's book is, that the death-rate from typhoid fever, instead of ranging from thirty-two to sixty-four in each 100,000 of population, as it did in Philadelphia from 1890 to 1896, or from thirty-one to one hundred and sixty in each 100,000, as in Chicago during the same period, need not be over four or five in the 100,000, if only our municipalities could be governed on business principles, with the help of the best sanitary science.

The proof is to be found in the effects of a thorough system of sand filtration of public water supplies in a number of European cities. For instance, in Berlin the mortality from typhoid has, by such filtration, been so reduced hat in each of the years 1895 and 1896 it was five, while in 1894 it was only four, in every 100,000 of the population. In Amsterdam the rate was nineteen in 1890 and came down to three in 1896. In Hamburg the proportion was twenty-eight in the 100,000 in 1890, but an epidemic of cholera compelled the institution of radical measures for the purification of the polluted Elbe water (which, however, as the typhoid death-rate shows, was not half as filthy as the Schuylkill river water furnished to Philadelphia), and in consequence the typhoid rate in 1896 had fallen to six in the 100,000.

But, lest the thrifty governing bodies of those American cities whose inhabitants are still obliged to drink diluted sewage, should use these figures in support of the adoption of some one of the various mechanical filters which are being actively exploited in this country, it is proper to add a few more statistics. In Atlanta, Ga., the typhoid death-rate was 151 in 1890 and, in spite of the operation of a mechanical filter, had not been reduced lower than 30 in 1896. In Chattanooga, Tenn., the rate was 145 in 1890 and with the help of a mechanical filter came down to 60 in 1896—to a rate just fifteen times higher that it should be under proper sanitation.

Not only in Philadelphia and Chicago, bu also in Boston, Baltimore, Pittsburg, Cincinnati, Louisville, St. Louis and especially in our national capital, where the rate has ranged from 83 in 1890 to 51 in 1896, as well as in other cities, unfiltered polluted river or lake water is still furnished the people for drinking purposes. The aggregate amount of death, suffering and disability resulting through the abnormal prevalence of filth diseases, in consequence of this reckless disregard of the simplest sanitary principles, is incalculable, and can only be characterized as something awful.

It would certainly seem as though our medical organizations should be stirred to more active efforts in the direction of urging sanitary reforms, and assume their proper place as leaders of public opinion in these matters which so vitally concern the public health.

Vegetarianism in Germany.

The meat-eating races have immensely surpassed the Oriental vegetarians in intellectual advancement, in military prowess and in nearly every useful or important sphere of activity. The Anglo-Saxon and Teutonic peoples especially consume a much larger proportion of animal food than the Latin races, possibly as a result of climatic conditions, and the manner in which

the former are distancing the latter in the race for supremacy has been attracting the earnest attention of sociologists, particularly since the war between the United States and Spain has afforded such a striking object lesson. It has been demonstrated, also, that in certain diseased conditions of the alimentary tract, a properly selected animal diet is more easily digestible and conduces better to a cure than other foods. Yet, it must be admitted that the question, as to what form of food is best adapted to support the healthy body while undergoing either ordinary or extraordinary muscular exertion, has not yet been finally answered.

A letter from Berlin to the *Medical News*, indicates that in a recent bicycle contest the non-meat-eaters carried off the honors. The correspondent writes:

"Just at the beginning of July the Turning Club of Berlin held a bicycle contest, a so-called *Tages-Dauermarsch*, a continuous day's travel, the contestants in which, to get a place, must have completed fifteen German miles (112.5 kilometers, about seventy English miles) in eighteen hours. The contest was won by a vegetarian who made the distance in the record time under the conditions (we quote German papers) of fourteen hours and eleven minutes. He arrived at the finish in comparatively good condition, fresh and not exhausted. Of twenty-three other contestants eight were vegetarians and six of them were the first in the contest and made the distance within the time limit. Only one of the fifteen non-vegetarians made the distance within the time, all the others having to give up. The winners had no special training for the event, but were like the other contestants, ordinary members of the Turning Club. During the run the vegetarians consumed only sweet fruits, fresh salads, and some bread and milk. So long as the meat-eaters remained in the race the difference as to the two classes of contestants in the matter of exhaustion was very striking and in favor of the vegetarians, who looked fresh and unruffled when the others were already playing out. The event has attracted a great deal of attention in Germany. The army officials have consulted the winner and his friends as to their diet and habits and have instituted a set of investigations as to their power of standing military fatigue on a vegetable diet. So far the results are said to be surprisingly favorable to the energy that can be developed on a dietary so supposedly insufficient. The result has been a boom to vegetarianism otherwise in Germany, and the number of vegetable restaurants has notably increased in Berlin."

In other recent trials of endurance in Europe we have heard of a similar victory for the non-meat-eaters, and much has been written of the prodigies of work performed by the Chinese coolies with little or no food

except a few handfuls of rice taken morning and night, though rice is not one of the strongest or most nourishing of the grains.

Indeed, so far as regards muscular strength and endurance, the weight of evidence is possibly with the vegetarians. Horses and oxen, which are entirely herbivorous are the strongest of animals. Yet in a fight the flesh-eating lion or tiger, though smaller, is more than a match for them. The subject of the preferable food for man is a large and complicated one and involves many considerations.

A Word About Our "Talks."

Three more "Talks to General Practitioners" appear in this number. Professor Montgomery describes plainly and clearly the significance and danger of hemorrhage from the genital tract in women. He also gives valuable practical instruction as to the remedies. Dr. Pyle discusses points of the utmost importance in the treatment of iritis. The editor discusses when and how to wash out stomachs, and will follow this up in December with an explanation of the simpler and more useful tests of stomach contents. The remarkable lecture by Professor Clifford Allbutt, of England, with which the number opens, is in the same eminently practical vein as that marked out for the "Talks," besides being noteworthy for its terse and felicitous style. Those of us who are filling the rôle of teachers in this new form of polyclinic, could not do better than to take Dr. Allbutt's lecture for our model. It is filled with solid chunks of valuable knowledge told in the most unaffected and unpretentious manner.

Professor Van Harlingen has been prevented by illness from beginning his discussion of the commoner skin diseases, but will probably be heard from in the December number. Professor Kyle will also initiate in the same number, his practical lessons on the affections of the nose and throat, which general practitioners are most frequently obliged to treat.

Series of "Talks" on several of the other specialties have also been promised.

BOOK-REVIEWS.

THE PURIFICATION OF PUBLIC WATER SUPPLIES. By John W. Hill, Consulting Engineer. New York, D. Van Nostrand Company. London, E. & F. N. Spon. 1898.

This book is in continuation of a series of lectures and papers presented before several scientific bodies on the quality of public water supplies during the past five years. It includes (1) a plain, straightforward account of the causes of the large mortality from typhoid fever in most American cities, show-

ing from an eloquent array of statistics gleaned from the experience of numerous cities in Europe, that it is for the most part a direct result of drinking sewage-polluted water. By the same most significant tables of the comparative death-rate from this one disease in various cities before and after the establishment of a thoroughgoing scientific system of filtration, it shows (2) that typhoid fever is quite as preventable a disease as smallpox and the bubonic plague, which formerly almost depopulated cities and now rarely prevail in civilized countries. But, over and beyond this one striking lesson, the author has condensed into his book a large amount of valuable information concerning the origin and spread of typhoid epidemics and the various methods, successful and unsuccessful, that have been devised for the improvement of water supplies. The various systems of filtration, including several mechanical contrivances which in this country especially have been widely advertised and aggressively pushed by certain companies of promoters, are discussed with a refreshing candor.

Mr. Hill's interesting and valuable work suggests some questions of vital importance to every community which is still obliged to drink water teeming with typhoid germs, and these have been made the subject of editorial discussion in the present number of the INTERNATIONAL.

ELEMENTS OF HISTOLOGY: By E. Klein, M.D., F.R.S., Lecturer on General Anatomy and Physiology in the Medical School of St. Bartholomew's Hospital, London, and J. S. Edkins, M.A., M.B., Joint Lecturer on and Demonstrator of Physiology in the Medical School of St. Bartholomew's Hospital, London. In one 12mo volume of 506 pages, with 296 illustrations. Cloth, $2.00, net. Lea Brothers & Co., Philadelphia and New York.

This greatly enlarged and thoroughly revised edition of Professor Klein's admirable little work will be welcomed by both students and practitioners. The additions comprise 125 pages of printed matter and 101 new engravings. The illustrations are especially clear and satisfactory, not being surpassed by those of any of the larger works on the same subject. The histology of the brain, cord and nervous system generally is described and illustrated with remarkable fullness for a manual of such moderate size and the account of the digestive tract is scarcely less complete. The mechanical execution of the volume merits especial praise, being in all respects most excellent.

A CLINICAL TEXT-BOOK OF MEDICAL DIAGNOSIS FOR PHYSICIANS AND STUDENTS. By Oswald Vierordt, M.D. Authorized translation with additions by Francis H. Stuart, A.M., M.D. Fourth American Edition from the Fifth German, revised and enlarged. Philadelphia, W. B. Saunders. 1898. Price in cloth, $4.00.

Vierordt's Diagnosis jumped at once into the favor of the medical profession upon its first appearance, and the fact that in Germany a fifth edition has been required in nine years indicates that its merits are of the solid order. It is a new proof also of its popularity in this country that its American publisher has felt warranted in issuing a fourth edition to be sold in competition with standard treatises by American authors.

Numerous alterations and additions have been made, especially in the sections on the nervous system and the stomach, including gastric digestion. The author is evidently less at home in the digestive tract than elsewhere, and he would have done well to entrust this portion of his task to some one of the numerous men who are now devoting special study to the subject. For instance, he goes too far in saying (page 307) that "acetic-acid fermentation is suppressed by traces of free hydrochloric acid," and again in discussing the

methods of examination of the stomach he greatly under-values the value of percussion in defining its boundaries. He does not refer at all in this connection to auscultatory percussion, which has been taught for a number of years and assists so much in giving precision to the results of percussion. Auscultatory friction, a very recent discovery, we would scarcely expect to find embodied already in a book which must have left the hands of the author several months ago. In the directions for the introduction of the soft stomach tube, the physician is told to guide the little instrument into the pharynx by the aid of the fingers on the left hand held far back on the tongue. This is a sure way to provoke vomiting and a struggle for breath, and, though necessary in passing a stiff sound, is condemned by nearly all recent authors in using the soft flexible tube.

These blemishes, in an otherwise admirable and invaluable work, are the necessary results of any one man's attempting now-a-days to teach the diagnosis of diseases in all the parts and functions of the human body. Specialism has been forced upon an unwilling profession, and, being a necessity, has come to stay. It is probable that we have seen almost the last of the great, comprehensive treatises on Physical Diagnosis, or even on the Practice of Medicine proceeding from the giant brain and prodigious labor of a single man. The task is becoming every year more difficult and must soon become impossible even for the coming DaCostas, Peppers, Tysons and Mussers.

The mechanical execution of the book is excellent. The illustrations are numerous and good and the typography all that could be asked by the most exacting.

THE CARE OF THE BABY; A MANUAL FOR MOTHERS AND NURSES. By J. P. Crozer Griffith, M.D. Second edition. Philadelphia, W. B. Saunders. Price, $1.50.

This is one of the best books of the kind with which we are acquainted. It tells all that mothers and nurses need know about babies and something more. There is every reason why the laity should be taught how to take care of their health and that of their children, and it is manifestly better that this should be done by competent physicians, such as Dr. Griffith, rather than by quacks. It is well also that they should be instructed in so much of the science and art of medicine as may enable them to meet emergencies in the absence of a physician, as well as the best methods of relieving such minor ailments as scarcely require the attention of a physician, or at least rarely receive it. It is not clear to us, however, that anything is gained by attempting to teach mothers how to diagnosticate the various exanthemata from each other. Even good physicians may sometimes be in doubt whether a rash means varicella or varioloid, and when a mother attempts to decide in such a case, disastrous mistakes are likely to result.

ESSENTIALS OF MATERIA MEDICA, THERAPEUTICS AND PRESCRIPTION WRITING. By Henry Morris, M.D., Fellow of the College of Physicians, etc. Fifth edition. 1898. Philadelphia, W. B. Saunders. Price, $1.00.

This very convenient and admirably arranged compend, while written primarily for students, is a handy reference book as well for busy practitioners. The therapeutic information is for the most part as reliable as very condensed statements can be, but the explanation of the effects of acids and alkalies upon secretion (p. 55), needs qualification. It is not true that acids in any dose given before meals diminish the secretion of the gastric juice, or that alkalies given before meals, regardless of dose, increase the same secretion. Recent clinical experience points to the probability that the usual therapeutic doses of HCl,

whether taken before or after meals, increase the secretion of that acid by the gastric glands, and large doses of alkalies certainly depress that secretion regardless of the time of administration.

THE PRINCIPLES OF BACTERIOLOGY: A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene, and Director of the Laboratory of Hygiene, University of Pennsylvania. Fourth edition, enlarged and thoroughly revised. With 106 illustrations, of which 19 are colored. Lea Brothers & Co., Philadelphia and New York. 1897.

Abbott's well-known work on bacteriology has deservedly reached its fourth edition. The book has been brought up to date by the addition of new matter, such as illustrated descriptions of the bacilli of bubonic plague and of influenza. Its value as a laboratory manual has been increased by a revision of the descriptive method of performing bacteriological experiments.

MANUAL OF CHEMISTRY. A GUIDE TO LECTURES AND LABORATORY WORK FOR BEGINNERS IN CHEMISTRY. A text-book specially adapted for students of medicine, pharmacy and dentistry. By W. Simon, Ph.D., M.D., Professor of Chemistry in the College of Physicians and Surgeons of Baltimore; in the Maryland College of Pharmacy, and in the Baltimore College of Dental Surgery. Sixth edition, thoroughly revised. With forty-six illustrations and eight colored plates, representing sixty-four chemical reactions. Lea Brothers & Co., Philadelphia and New York. 1898.

The fact that this book has reached its sixth edition speaks highly in favor of its usefulness. There are many text-books and manuals on the market, but only the fittest survive, and this manual is undoubtedly one of the best. This edition contains descriptions of a number of new experiments as well as a few of the most modern methods for chemical analysis of urine, milk and stomach contents. As to the latter, we may remark that, although the majority of authors carry the titration with phenol-phtalein for estimating the total acidity to the color indicated by the author, some of the latest authorities (Hemmeter) with much of reason in their favor, advise titrating until a drop of the potassium hydroxide solution produces no change in color. In conclusion, we may say that the book is specially useful to the student and practitioner of medicine, and is used with satisfaction as a text-book in many of the medical schools.

AMERICAN POCKET MEDICAL DICTIONARY. Edited by W. A. Newman Dorland, A.M., M.D. Philadelphia, W. B. Saunders. 1898.

This handy little volume contains a large amount of useful information, comprising over 26,000 medical terms and over sixty important tables. We have searched through it for many of the newest words in medicine, including the names of new medicines, and especially those of the recent synthetic preparations which our German friends are manufacturing at such an alarming rate; and have not once been disappointed. The book is well printed, neatly bound in morocco and sold for $1.25.

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M.D., F.R.C.P. Revised and enlarged by F. Montague Murray, M.D., F.R.C.P. New American from the eighth English edition. Thoroughly revised by Walter Martin, Ph.D., M.D. Lea Brothers & Co., Philadelphia and New York.

Pathology has been advancing and expanding at such a phenomenal rate

during recent years that the last few editions of this popular manual have necessarily undergone extensive revisions in order to keep in harmony with current teaching. The eighth English contained sixty new illustrations and several entire new sections were added to the letter press, while other sections were rewritten. In the eighth American edition a number of further improvements have been made. The work has been kept well up to date and is still one of the most satisfactory text-books upon the subject. The mechanical execution of the volume is remarkably good and the new illustrations are especially praiseworthy.

PAMPHLETS AND REPRINTS RECEIVED.

Acute Inflammation of the Middle Ear, by E. C. Ellett, M.D., Memphis, Tenn.

The Diagnosis of Calculous Nephritis by Means of the Roentgen Rays, by Charles Lester Leonard, A.M., M.D., Philadelphia. *Phila. Med. Jour.*, 1898.

The Pathology of Tabes Dorsalis: A Critical Digest, by William G. Spiller, M.D., Philadelphia. INT. MED. MAG., June, 1897.

A Contribution to the Surgery of Gastroptosis and Enteroptosis, by Byron B. Davis, M.D., Omaha, Neb. *Western Med. Review*, May, 1898.

Preparation of the Patient for Operation, by Byron B. Davis, M.D., Omaha, Neb. *Western Med. Rev.*, May, 1898.

Tuberculosis and Its Treatment by the Later Methods, by A. G. Deardoff, M.D., San Francisco, Cal. *Jour. Am. Med. Ass.*, June 29, 1898.

Ueber die Pathogenität der Loeffler'schen Diphtheriebacillen, von Dr. Fritz Schanz, Augenarzt in Dresden.

Organic Nervous Diseases as Neuronic Diseases, by William G. Spiller, M.D., Philadelphia. INT. MED. MAG., February, 1897.

The Value of Surgery in Nervous Diseases, by Henry Waldo Coe, M.D., Portland, Ore. *Western Med. Review*, June, 1898.

Acute Chloral Dementia Simulating Paretic Dementia, by Henry Waldo Coe, M.D., Portland, Ore. *Medicine*, August, 1898.

A Post-Graduate Clinical Lecture on Mitral Stenosis, with Special Reference to Recent Investigations, by A. Earnest Sansom, M.D., F.R.C.P., etc., London, Eng. *Brit. Med. Jour.*, June 25, 1898.

A Case of Tononitis, by E. C. Ellett, M.D., Memphis, Tenn.

The Determining Cause of the Site of Ulcers on the Nasal Septum, by E. C. Ellett, M.D., Memphis, Tenn.

Hemorrhagic Glaucoma: Report of a Case with Micro-Photographs, by E. C. Ellett, M.D., Memphis, Tenn.

Rheumatic Pharyngitis, by Lewis S. Somers, M.D., Philadelphia. *Med. News*, July 16, 1898.

The Treatment of Chronic Naso-Pharyngitis, by Lewis S. Somers, M.D., Philadelphia. *Memphis Lancet*, July, 1898.

The Effect of Hypertrophy of the Inferior Turbinal on the Nasal Septum, by Lewis S. Somers, M.D., Philadelphia. *Univ. Med. Mag.*, July, 1898.

A Contribution to the Study of the Symptoms of Chronic Urethritis, by Ferd. C. Valentine, M.D., New York. *Jour. Am. Med. Ass.*, August 27, 1898.

Movable Kidney, with a Report of Cases, by John A. Lichty, M.Ph., M.D., Clifton Springs, N. Y. *Phila. Med. Jour.*, 1898.

The Uses of the Stomach Tube in the Practice of General Medicine, by John A. Lichty, M.Ph., M.D., Clifton Springs, N. Y. *Buff. Med. Jour.*, July, 1898.

Practical Anæsthesia, by S. Ormond Goldman, M.D., New York. *Med. News*, July 16, 1898.

Neurotic Lithemia, by Chas. F. Craig, M.D., Danbury, Conn. *Southern Practitioner*, 1898.

The Treatment of Uricacidemia, by John L. Heffron, A.M., M.D., Syracuse, N. Y. *Med. News*, July 2, 1898.

Vibratory Therapeutics, by Frederick Peterson, M.D., New York. *Med. News*, January 29, 1898.

New Paths in Psychiatry, by Frederick Peterson, M.D., New York. *Phila. Med. Jour.*, 1898.

Katatonia, by Frederick Peterson, M.D., and Charles H. Langdon, M.D. *Am. Med. Physocal. Ass.*, 1897.

Beneficial Effects of the Withdrawal of Bromides in the Treatment of Epilepsy, by Frederick Peterson, M.D., New York. *New York Med. Jour.*, September 25, 1897.

A Case of Amaurotic Family Idiocy with Autopsy, by Frederick Peterson, M.D., New York. *Jour. Nervous and Mental Dis.*, July, 1898.

Some Remarks Concerning Rectal Affections, with Especial Reference to the Physical Exploration of the Rectum, by Lewis H. Adler, Jr., Philadelphia. *Therap. Gaz.*, June 15, 1898.

Die Haltbarkeit der gelben Augensalbe, by Dr. med. Fritz Schanz, Dresden.

Der Werth der Statistiken ueber die Serumtherapie bei Diphtherie, by Dr. Fritz Schanz, Dresden.

Turbinotomy, Method of Operating, by R. P. Lincon, M.D., New York.

The Advantages of Physical Education as a Prevention of Disease, by Charles Denison, A.M., M.D., Denver, Colorado. *Bull. Am. Acad. Med.*, Vol. 3, No. 9.

Wiederum: Das Varhältniss der sogen, Xerosebacillen der Conjunctiva zu den Hoffmann-Loffler'schen Pseudodiphtheriebacillen des Rachens. Entgegnung an Herrn Prof. Axenfeld, von Dr. med. Fritz Schanz in Dresden.

Die falschen und echten Diphtheriebacillen, von Dr. Fritz Schanz, Augenarzt in Dresden.

Infectious Endocarditis, with Septicemia, Complicated with Multiple Neuritis, by James Hendrie Lloyd, A.M., M.D., and David Riesman, M.D.

Report of a Case of Cancer of the Pyloric End of the Stomach, Associated with Gall-Stones, and a Pediculated Tumor of the Peritoneum (Angio Lipoma), by David Riesman, M.D.

Neurasthenia Gastrica, or Nervous Dyspepsia, with a Peculiar Cardiac Symptom (Paulocardia), by David Riesman, M.D.

Xerostomia (Dry Mouth), with the Report of a Case, by David Riesman, M.D.

Neurasthenia: Its Nature and Treatment, by David Riesman, M.D.

Charcot-Leyden Crystals, by David Riesman, M.D.

Hysteric Rapid Breathing (Hysteric Tachypnea), with the Report of Two Cases in Children, by David Riesman, M.D.

Hysteric Clonic Spasm of the Wrist, by David Riesman, M.D.

Rheumatoid Arthritis, with Report of Two Cases, by David Riesman, M.D.

Chorea in the Aged, With the Report of a Case of the Disease in a Man aged Seventy-five Years, by David Riesman, M.D.

PERSONAL.

Professor K. F. Slawjansky, a distinguished Russian gynecologist and obstetrician, died September 11.

Dr. A. E. Sansom on October 10th, retired from the presidency of the Medical Society of London. His successor is Mr. Edmund Owen.

Professor Clifford Allbutt, of Cambridge University, England, visited Philadelphia recently and delivered addresses both at the University of Pennsylvania and the Jefferson Medical College. He was given a dinner and later a reception by Professor John H. Musser on the evening of October 20th.

Dr. C. D. Spivak has resigned from the Chair of Anatomy in the Denver University and Dr. Hobart E. Warren has been appointed to the place.

PRACTICAL NOTES

Liquid Air in Medicine and Surgery. The discovery of how to produce liquid air is due to an Englishman, but it is said that an American has gone further than this and has succeeded in putting the discovery to practical use. He also claims that in medicine and surgery its possibilities are numerous. According to the *Cosmopolitan:* "By means of this process, air absolutely free from germs could be furnished in any amount; and if the stimulating effect of an excess of oxygen was desired, it could be had without trouble, quite free from the impurities which now often make this gas objectionable. The temperature of hospital wards, even in the tropics, could readily be cooled to any degree prescribed by the physicians in charge; and by keeping the air about yellow-fever patients down to the frost point, the nurses would be perfectly protected against contagion and the recovery of the patients themselves facilitated. Again, the cauterizing cold which liquid air is capable of producing might be used in cases of cancer with great advantage, as compared with nitrate of silver, since, while it absolutely destroys the flesh to which it is applied, its action is perfectly under control and can be stopped in an instant. It is probable also that hay fever, asthma, and even consumption could be greatly relieved without change of climate by this pure, cool, germless air."—*Medical Record.*

Tuberculosis of the Lungs. Dr. Langdon B. Edwards, professor of practice of medicine, University College of Medicine, Richmond, Va., re-

ports in Vol. 53, No. 15, *New York Medical Record*, thirty-five cases of tuberculosis of the lungs treated with serum with eleven total recoveries, and by recovery he means disappearance of bacilli, healthy respiratory action, chest expansion increased from one to two and a-half inches, flesh increased to normal, and that the patients look well and, according to physical signs and symptoms, are well. He noted other patients improving and states that the record is greatly better than he ever obtained with any other treatment than serum; that he had used no other serum than Paquin's, of St. Louis.

New Treatment for Syphilis. Dr. Lalande, a homœopathic physician, of Lyon, recently proposed before the Société de Biologie de Paris to treat syphilis with hypodermic injections of a saline solution of powdered calves' horn in the proportions of

Pulv. cornu,	grm. 60.
Sod. Chlor.,	grm. 10.
Aqu. dest.,	grm. 1000.

The doctor claims the most satisfactory results for his prescription; old cases in which he used the treatment for two years had no relapses during that time.—*J. des Praticiens*, 1898.

Milk and Infantile Mortality. Dr. Temière discusses infant mortality in the city of Lille. The death-rate under two years of age in that city is 398.6, and in one parish it has risen to 520 for every 1,000 deaths recorded. A large proportion of these is attributed to gastro-enteritis, which is most prevalent in districts inhabited by the working classes, the comparative mortality between a rich and a poor district selected for illustration being as one to seven. Gastro-enteritis is, as a rule, a preventable disease. It is satisfactory to find that its explanation is sought for where it is most likely to be found—namely, in the diet administered. Dr. Temière makes two practical observations—one in which he accuses the employment of watered milk as a cause of malnutrition, and the other in which he advocates efficient sterilization and general care in feeding. It is true, they teach nothing new, but they remind us of precautions which should never be, but constantly are, forgotten. We do not dispute the influence of subsoil water as a factor in the production of infantile diarrhœa, but we recognize as of equal and even greater importance the quality of the infant's milk supply. The former consideration is, in a great measure, *ultra vires*; the latter is at all times within our control. If this control is applied with judgment and vigor the climatic and subterranean evils may often be entirely counteracted. Nothing, therefore, in domestic management is more important than care in the selection of the milk used and in its after-treatment, the health of the cattle producing it, of the people who sell it and the cleanliness of the persons and vessels connected with its sale are as much the concern of a nurse or mother as is its

actual preparation for the infant. As a rule, mothers in this country understand the importance of cleanliness in all the manipulations of artificial feeding. Nevertheless they are frequently in error. They are very apt to underestimate the value of fresh air, especially at night, and many an infant is poisoned with milk which has fermented in a close bedroom.—*Maryland Med. Jour.*

Fracture of the Elbow Without Pain or Swelling. Kocher (*Correspondenzblatt, Schweitz Aertze*, No. 17, 1898) reports a case of fracture of the elbow caused by a fall, an unusual feature of which was the entire absence of pain and swelling, so that the patient did not stop work. All movements are retained except perfect extension. Of late, however, the patient has noticed that during extension a sudden obstacle is encountered and the act can be completed only after a certain interval. When the arm is passively extended, the fragment of external condyle can be felt between that structure and the radius. In these cases the fragment is always displaced on to the posterior surface of the arm.

MEDICAL NEWS AND MISCELLANY.

Egyptian Medical Tattooing. Fouquet (*Centralbl. f. Chir.*, 25, 1898) found upon the body of a priestess who was embalmed in the eleventh Dynasty—about 3,000 years B. C.—linear blue marks which he at first supposed were for ornament, but which he afterward concluded were the result of some vigorous application of remedies. The marks were both below and above the umbilicus, those below running almost horizontally while those above it ran in a vertical direction. The surgical measures were evidently taken a long time before the death of the woman, and were perhaps intended to cure her of some pelvic trouble, chronic pelvic peritonitis or what not. This method of introducing drugs into the body is still practiced in Egypt, and the writer was able to collect details of ninety-seven cases in which it was employed. In most of them the tattooing was done upon the temples for the relief of headache or neuralgia, but in other cases the scarification was made upon the hands, feet, shoulders, knees, buttocks, neck, or abdomen. The technic of this treatment is as follows: From three to seven needles, which are bound together in a bunch, are thrust obliquely into the skin. When blood begins to flow from the punctures thus made, a mixture of milk and soot, to which the juice of various plants has been added, is rubbed into the wounds.—*Medical News.*

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ORIGINAL PAPERS.

GUMMA OF THE TONGUE.

BY WILLIAM S. GOTTHEIL, M.D.,

Professor of Dermatology, New York School of Clinical Medicine; Dermatologist to Lebanon Hospital and the Northwestern and German West Side Dispensaries.

THE characteristic manifestation of late syphilis in the tongue is the presence of the gumma, or, as it is perhaps better to term it, of gummous glossitis. Like all the other so-called tertiary lesions, it does in rare instances occur in the early stages of the disease; thus Maes has seen it as soon as 16 or 17 weeks after infection. As a rule, however, it appears many years later. The latest that I know of are those recorded by Joseph and Pellizari, which were 30 and 40 years respectively after the initial lesion. There is probably no limit, save the length of the patient's life, to the time that may elapse before it appears.

Gummous glossitis is comparatively rare; I find but one similar case in my note books. Lewin records 19 cases among 50,000 syphilitics. It is worthy of record for this reason alone; but it is of especial importance on account of its marked resemblance to carcinomatous disease. The differential diagnosis is in many cases very difficult to make. Even Von Langenbeck admits that the distinction between an unsoftened gumma seated deep in the substance of the tongue, and with the mucosa still intact, from cancer of that organ may at first be impossible. In both cases there is a more or less hard, deep-seated tumor. In cancer, it is true, pain is often a very prominent symptom, especially when the lingual branch of the fifth nerve is involved, and gummata are generally painless. But exceptions occur in both cases. It may happen that neither the age of the patient, nor the glandular involvement, nor the evidence of other luetic disease, past or present, will help us.

When the gumma has softened, and more especially when it has broken down and discharged part of its contents, the diagnosis becomes easier. In carcinoma the ulceration is deep and ragged, and the destructive process begins at the surface and progresses to the deeper parts. In gumma the reverse is the case, and the presence and growth, for a considerable time, of a tumor, with subsequent breaking down and ulceration, will elucidate the diagnosis.

It must not be forgotten, also, that the two diseases may coexist. It seems that neglected cases of syphilis of the tongue are especially prone to undergo carcinomatous degeneration, and quite a number of cases are on record in which the one disease was grafted upon the other.

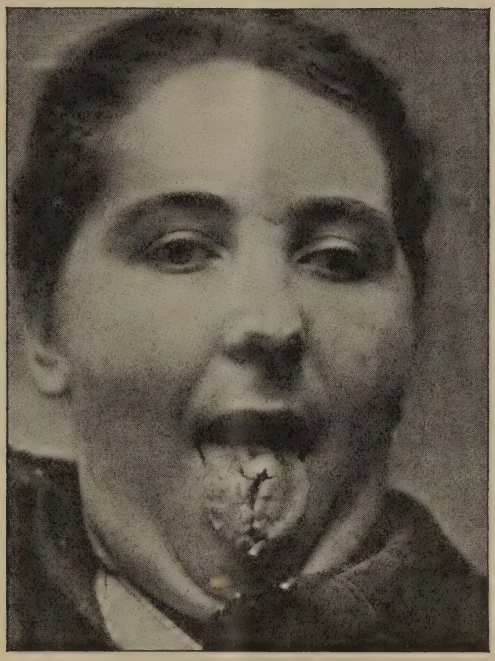
It is well, therefore, in every case of suspicious tumor formation or ulceration of the tongue, to begin the course with a vigorous course of antiluetic medication. A course of intra-muscular calomel injections or mercurial inunctions, together with proper doses of the iodide of potash (90 to 300 grains daily), will settle the question. It will also prevent an occurrence so mortifying to the physician as the mistaking of a tractable specific ulceration for cancerous disease, a mistake which has frequently occurred, even in competent hands. I well remember one such, in which all the preparations had been made for a radical operation, and the patient, a professional man, had settled his worldly affairs and resigned himself to death, for he knew the record of these cases. Luckily for himself and for the would-be operator, he consulted another physician, who had no grounds for doubting the first diagnosis, but, nevertheless, put the patient upon heroic doses of potassium iodide. The induration melted away, the ulceration healed, the operation was abandoned, and the patient resumed his avocation. I presume that syphilis was not thought of at first, because the patient was an old man and because his position was such as to make that diagnosis appear very improbable.

Tuberculosis attacks the tongue as it does other organs. This localization, however, is very rare; signs of tuberculosis of other organs, more especially of the lungs and larynx, are almost invariably present; the tubercular ulcerations are very painful, and nodular miliary tubercles will be found in the tissues around the lesion. In cases of doubt a fragment of the diseased tissue should be removed and examined for tubercle bacilli.

The mistaking of the softened gumma before rupture for an abscess, and vice versa, has often occurred, even to the most experienced observers. Von Langenbeck records three such cases. Luckily the mistake does no harm. Opening a softened gumma is of course to be avoided, for retrogression and absorption without rupture occur even in the most unfavorable-looking cases; and a mercurial-iodide course will have no effect upon a simple abscess. A few days' observation will, however, clear up the diagnosis. The opened gumma does not heal up as an ulcer would; and the simple abscess grows and finally breaks in spite of internal medication.

Chancre of the tongue is not very uncommon; I have several such cases among my records. Its recognition is not difficult, as a rule. Its beginning as a painless tumor, with subsequent superficial or deep ulceration; the marked and characteristic tumefaction of the submaxillary glands; the advent or presence of other symptoms of secondary lues are sufficiently characteristic. Nevertheless in certain cases the diagnosis may be doubtful, as the following case will show:

Mary H.; American, 24 years old, came to my clinic on April 15th of this year complaining of a sore tongue. Examination showed the presence of a large elongated tumor occupying the central area of the anterior part of the organ, and measuring $1\frac{1}{2}$ inches in length by $\frac{3}{4}$ inch in breadth. The edges and base of the tumor were moderately hard and infiltrated, but



there was no characteristic sclerosis. The central part of the tumor was occupied by a ragged, deep, longitudinal ulceration, covered apparently with florid granulations. The submaxillary glands were moderately swollen and quite hard. The tumor had commenced as a small lump deep in the tongue eight weeks before, and it was steadily getting larger. The exact time at which ulceration had begun could not be determined; in fact the patient attached very little importance to that feature of the affection; there was no history of a sudden rupture, as of an abscess. There was absolutely no pain connected with the affection, and the patient complained only of the discomfort and inconvenience caused by the presence of the tumor in her mouth.

No evidences of past or present syphilis were found anywhere, and this, with the age of the patient, her robust health, and the fact that she was a modest girl, had been recently married to an apparently healthy husband, and was pregnant, seemed to exclude tertiary syphilis. No stress was laid upon the history, more especially in the case of a woman; but as a matter of fact that was entirely negative. Cancer could be excluded from her age and sex. Primary tuberculosis was excluded from the appearance and course of the ulceration, and the normal condition of her lungs, larynx, and general system. The diagnosis lay between an ulcerated initial lesion and a softened gumma, with the chances apparently greatly in favor of the former.

The patient was therefore given a placebo and kept under observation. Both the tumor and the ulceration increased slowly but steadily in size, and on May 4th, the accompanying photograph was made. The mass had become somewhat softer. It was then the eleventh week after the appearance of the tumor, and not a single secondary manifestation had shown itself. The diagnosis of gumma was then made, and the results of treatment rapidly proved its correctness. Under moderate doses (90 grains daily) of the iodide of potassium, conjoined with small doses of mercury, the tumor rapidly decreased in size; the ulceration healed up; and three weeks later, when the patient withdrew from observation, there was hardly a trace to be felt in the tongue of the original induration, and the tumefied glands were reduced to one-half their former size.

The interesting point in the case, apart from the comparative rarity of the affection, is the presence of a tertiary lesion in a patient so young and presenting not the slightest evidence of luetic infection. It is an additional argument, if one were needed, of the absolute necessity of making the diagnosis in syphilis as in ordinary dermal affections, from the objective symptoms alone, and absolutely disregarding the anamnesis.

EMPHYSEMA OF THE ANTRUM OF HIGHMORE.

BY D. BRADEN KYLE, M.D.,

Clinical Professor of Laryngology and Rhinology in the Jefferson Medical College; Consulting Laryngologist, Rhinologist and Otologist to St. Agnes' Hospital; etc.

Emphysema of the antrum of Highmore is a condition in which there is accumulation of gas in the antral cavity. Although it is not commonly met with, it is of great importance and is often overlooked. The prime factor in its etiology is the generation of gases from a decayed tooth which communicates with the antrum. The gases so originating may be confined in the cavity, either from some occlusive condition of the orifice by morbid processes, or through failure to find vent through the ostium maxillare. If the antral opening is not affected the escape of the offensive gas into the

nose will lead to the mistaken diagnosis of a nasal lesion with ozena and the treatment will be directed to the unoffending nasal mucous membrane.

The condition I have observed in five cases. In one case there was no intranasal lesion, and the main symptoms that caused the patient to seek relief was the disagreeable and offensive odor. The other cases, however, had some irregularities within the nasal cavity whose only significance is the possibility of their being so located as to occlude the antral opening. Age does not seem to be an important etiologic factor, as the cases coming under my observation varied from childhood to past middle life.

The symptoms vary, depending largely upon whether the antral openl ing is partially or entirely occluded. There is usually a sense of intranasa- pressure which may gradually increase. Pressure-pain is dull; heavy, sickening headache is usually present and is markedly increased by stooping forward. Disturbance of the eye, nose and buccal functions may ensue. If the antral opening is closed the accumulated gas will give rise to pressure symptoms the same as in confused suppuration of the antrum. Percussion over the antrum may give a variation in resonance, although this is of little value owing to the great variation in the size of the antral cavity. Unless the condition is associated with an inflammatory lesion of the antrum transillumination is of little value, as the confined gas will offer no obstruction to the rays.

The diagnosis is not always easy and may often be made only by exclusion. Lesions of the teeth may call attention to their genetic influence. The symptoms of dental irritation in this region with subsequent cessation of pain and later development of pressure symptoms in the cheek with ozena that is continued or interrupted are always regarded as suspicious. There is usually an absence of the systemic phenomena of the presence of pus.

The prognosis is excellent. The majority of cases recover spontaneously and rapidly after vent is given to the confined gas and proper treatment of the offending tooth or teeth or the removal of necrosed bone.

The treatment of course consists in the evacuation of the confined gas, and this is usually better performed by the removal of the suspected tooth. Tapping of the antrum through the nose may be performed, which will relieve the pressure symptoms, but as the cause of the accumulation of gas is a diseased tooth, treatment should be directed toward the removal of the diseased tissue and necessitates the skillful aid of the dentist or a thorough knowledge of the subject of dentistry by the rhinologist; otherwise teeth may be unnecessarily sacrificed.

THE HOMBURG TREATMENT OF CHRONIC CONSTIPATION.

BY HANS LEBER,

Directing Physician of the Hydriatic Institute (Wasserheilanstalt) at Homburg v. d. Hoehe, Germany

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(Concluded.)

In the treatment of habitual constipation electricity is to be considered as a further rational therapeutic measure; either where there is only a disturbance of innervation or where there is actual atrophy of the muscular coat of the intestines. As to the action of the electric current on the intestines von Ziemssen (Clinical Lectures, No. XII.) has proven by his experiments that the faradic, as well as the constant, current are capable, when of sufficient intensity and with electrodes of sufficiently large diameter, of producing powerful contraction of the part of the bowel underlying the electrode. As an objective effect he assumed a stimulation of the motor innervation of the ganglia of the intestinal wall and intestinal nerves, an increase of the intestinal juices and perhaps also of the bile and pancreatic fluid. The subjective effect is shown at each commutation of the constant current, as well as during the entire duration of the faradic current, in a feeling of movement and warmth internally and a sense of comfort which persists even after the cessation of the sitting.

In the manner I perform electrization, the position of the electrodes is either lumbo-abdominal, or simply abdominal, or recto-abdominal. In the first variety the anodal electrode, having a surface of about 400 sq. cm. is placed in the lumbar region, the other cathodal electrode covering the entire anterior surface of abdomen. At the beginning, galvano-faradization after de Watteville, with a moderately strong current, for about five minutes. Then a smaller electrode of about 50 sq. cm. is substituted for the large anterior one and the primary induced current employed. Beginning in the ileocecal region and following the entire course of the colon, the electrode is retained at each point about half a minute and by frequent breakings of the current powerful contractions of the abdominal walls are produced. In the second variety an electrode of 50 sq. cm. is placed on the ascending part of the colon and a second of the same size on the descending part. A secondary induced current is used of such force as to produce visible contractions of the abdominal walls. The electrodes remain five minutes in this position, and by frequent interruptions of the current powerful contractions are produced. Then transposition of the electrodes to the right and left flexures of the colon again for five minutes, and the same variety of current. Finally, the electrodes are placed transversely above and below the umbilicus for the same space of time and variety of current. In decided atony and dilatation of the large intestine

I follow up the above procedures by another in which the position of the electrodes is a recto-abdominal one; *i. e.*, with an electrode of 50 sq. cm. on the descending colon and a cathodal rectal electrode described by Hunerfauth (*Therapeutische Monatshefte*, June, 1889) in the rectum. By means of galvano-faradization with a weak induced current and a constant current of 2 or 3 m. a. for three to five minutes, with frequent commutation, a moderately powerful stimulus is produced on the nerves of defecation, so that frequently the patients are compelled to go to stool immediately (and with good results).

For the reason that nearly all patients suffering from a long-standing constipation are troubled more or less by neurasthenic difficulties, it is desirable to employ a water cure, entirely regardless of the fact that we can act on the existing fundamental complaint by hydriatic means. Of these last, besides the well-known Priessnitz application, which is worn over night, the so-called Scotch douche is to be preferred. It consists of a jet of water half an inch in diameter of alternately high and low temperature, changing every ten seconds, directed on the abdomen for two or three minutes with or without being followed by a warm dry pack. Von Ziemssen writes of its effect (*loc. citat*): "The alternation of hot and cold is a very energetic stimulant to the entire neuro-muscular sphere of the intestinal tract. It produces at the same time hyperemia of the abdominal walls and abdominal contents and both effects, the stimulating as well as that producing hyperemia, are increased by the mechanical irritation of the pressure under which the douche is directed on the skin. The Scotch douche may, therefore, theoretically as well as according to practical experience, be placed by the side of electricity and abdominal massage as a valuable local tonic."

For constitutional treatment the matutinal wet and cold frictions, wet packs of an hour's duration followed by cold rubbing down, cold sitz-baths of short duration, and above all, cooled half baths, commend themselves. The latter I employ with especially good results and have them carried out in this manner: The patient sits in a half bath of 26° R. (90° F.) and has his whole body rubbed energetically during the entire bath by the attendant. Inside of three to five minutes the bath is cooled 3° or 4° R. (7 or 9° F.) by the addition of cold water, and the patient is afterward rubbed dry. When the patient is accustomed to cooler water I have the bath taken at a lower temperature, or begun daily two or three degrees lower; down to a final temperature of 16°–14° (68° or 64°), always with the daily difference of 7° to 9°. Through the energetic excitement of the sensory nerves of the skin which is transmitted to the central nervous system, these baths are usually refreshing and invigorating, producing in the skin an extremely pleasant sense of warmth and comfort. In a similar manner our local carbonic acid mineral baths act, since we now, as the result of the opening of the so-called Sool-Sprudel, have at our disposal a water which equals in its carbonic acid contents the best springs of

that kind known, and surpasses in its sodium chloride contents (2.6 %) many of its competitors.

Whichever of the above therapeutic means for the treatment of habitual constipation we may employ, be it singly or in combination, there is one which cannot be omitted without jeopardizing the entire success of the treatment. This is the regulation of the diet. Such great importance attaches to it because it must be continued, though somewhat modified, perhaps, not only during the sojourn here for treatment, but also for months afterward at home.

While in most of the cases a constipation of but short standing might have been cured by suitable dietetic regulations, this has for some reason or other been neglected, and so we find patients who, in consequence of their constant anxiety under no condition to overload their digestive organs, have for months and years restricted themselves to such a careful diet as would perhaps have suited a case of acute gastric or intestinal catarrh, and expected entire salvation from internal and external cathartics. Thus it is, that not rarely we find the patients astonished or even dismayed by the changed diet that their stomach and intestines are now expected to take. Many can only gradually be led to abandon their former manner of living and follow exactly the new dietetic regulations. It is self-evident that in diet if anywhere the most rigid individualization must take place. Entirely aside from the fact that we have to deal, now with weakly patients more or less debilitated by their manner of eating, and again with patients whose lustiness and strength the disease has as yet in no way affected, or even with stout patients, there are not a few who suffer with a chronic disease of the stomach or intestinal mucous membrane, with disturbances of secretion and of the glandular organs connected with the digestive tract. But luckily the latter patients are rare, and, provided the motor strength of the stomach is not already too far diminished, the diet should be coarse, stimulant to the peristalsis and rich in residue. Usually this means a mixed diet with a preponderance of vegetables, sometimes even (for a time at least) an exclusively vegetarian one.

Until recently the view was held that the employment of cold saline springs (such as Homburg, Kissingen, etc.) required a restriction in the choice of nourishment, and accordingly in these resorts there were short bills of fare of the permitted, and long ones of the prohibited, foods. But the later experiments of von Noorden and his students have proved that sodium chloride springs of themselves did not require such restrictions. This puts us in the fortunate position to adapt our dietetic regulations, not to the spring, but to the disease of the patient; even if we still take the spring so far into consideration that in general we prohibit, immediately after partaking of the same, very fat or acid foods, and only allow them if necessary two or three hours later. It would carry me too far to give the detailed regulations for diet at this place, and I can only offer here the general outlines of a "constipation diet."

As a rule, five or six meals are advisable. I consider a hearty and strengthening first breakfast of great value: One or two cups of weak tea, 60 or 100 gm. of cold meat or ham, or two soft-boiled eggs, 50 or 100 gm. of Graham bread, and very little or no butter or honey. In the morning the digestive power of the stomach is at its best, and the presence of the large quantity of the introduced food has a stimulating effect on the peristalsis of the bowels, and brings about, as a rule, a movement immediately after the first breakfast.

The principal meals consist of one or two meat dishes, or in place of meat, fish and potatoes, or eggs in some form, plenty of vegetables—all varieties of cabbage, especially sour cabbage, spinach, carrots, green peas, string beans, pea or lentil purèe, mashed potatoes, or salad (especially potato salad), sweet stewed fruit, particularly cranberries, sweet dishes with plenty of raisins and currants, and one or two glasses of a light Moselle wine. At the intermediate meals I give a plate of vegetable soup (cauliflower, pea, lentil, etc.) or a plate of sour milk or buttermilk with some pumpernickel broken into it, or two-day-old kefir or one-fourth to one-half a liter of sweet cream mixed with an equal quantity of milk, and one to two tablespoonfuls of milk sugar, and have the patient eat in the course of the day one-fourth to one-half a pound of raw fruit (particularly apples), and one-half a pound of Graham bread. Especially in the beginning I consider it useful to rest half an hour to an hour after the principal meals, and during this time make warm applications to the stomach, which may conveniently be done by means of a hot-water bag.

Some general regulations concerning the manner of living should not be forgotten here. Besides regularity in meals the patient should accustom himself to go to stool at a definite time, a habit to be acquired with some patience and persistence. The best and most convenient is the time after the first breakfast. Furthermore, he should take some bodily exercise, and, if the circumstances permit, the practice of some sport within sensible bounds; horseback riding, bicycling, gymnastics, tennis or golf are advisable. Very often one is asked by anxious patients what would happen to them if, on account of their departure, they should be compelled to stop the entire treatment employed previously—whether this would not at once bring back all their old difficulties? This question is not altogether without reason, but it may be answered to the effect that it may very well happen, that in rare cases for a short time after the return to domestic cares and business activity, some disturbances may show themselves, but that an exact conformity with the dietetic regulations (which, as just mentioned, must be maintained for a long time, or during life) will be followed in a few days by normal conditions again. In foreigners, however, and in cases were it may be days and weeks before they return to their regular home routine, and with those to whom, as a result of long railway journeys and imperfect restaurant food there can be no thought of regular meals and manner of living, the danger of a relapse is greater. To avoid

this I either advise them to drink each morning before the first breakfast one-fourth to one-half a liter of fresh water with one or two teaspoonfuls of Homburg salts, or give them a powder consisting of rhubarb, baking soda and sulphur in the proportion of 2 : 1 : 1, of which they take one drachm in the evening before retiring, and add the strict injunction to omit the powder or salts as soon as they have been for several days in their accustomed circumstances, and attempt to achieve regular bowel movements by means of an adherence to their dietetic and other prescriptions.

TALKS TO GENERAL PRACTITIONERS.

A polyclinic in print embodying simple lessons in so much of the newer methods and procedures in the specialties as it is important and practicable to teach in this way to physicians generally; and the occasional rehearsal of old but neglected truths.

THE SIMPLER TESTS OF THE STOMACH CONTENTS.

BY BOARDMAN REED, M.D.

In many obscure cases of disease it is quite as important to investigate the chemical functions of the stomach as it is to examine the urine. In dyspeptic conditions it is far more important. While, in complicated or stubborn cases, thorough analyses by an expert are desirable, every practitioner should be prepared to test, at least for the presence of HCl, vomited matters or the gastric contents obtained especially for diagnostic purposes. To omit this nowadays in repeated or persistent vomiting is inexcusable.

If a strip of congo-red test-paper dipped into the vomited matter is changed to a decided blue or blue-black color, it means free acid of some kind and nearly always free HCl. If the change is not well marked it may mean free organic acids such as result from fermentation. In this case adding a drop or two of a one-half-per-cent. alcoholic solution of dimethyl-amido-azo-benzol (to be obtained of Merck, or any wholesale chemist) will produce a bright cherry-red color in circles about the point of contact, and if much HCl be present, will impart a reddish tint even to a teacupful of the vomited liquid. This test may prove misleading in the rare contingency of there being present .2 per cent. or more of lactic acid, since such a large proportion of the latter is capable of causing a similar reddish color. If in doubt, you should test also by the Guentzburg reagent, which, as modified by Boas, is composed as follows:

℞. Phloroglucin, 2.00.
Vanillin, 1.00.
Alcohol (80 p. c.), 100.00. M.

To test for free HCl add a full drop of this to a very small drop of the stomach contents on a porcelain dish (a butter plate will answer) and heat slowly over a small flame. If free HCl be present a brilliant carmine hue will be developed as the liquid evaporates. This is the most reliable test. The red color with this test is not produced by anything except a free mineral acid, and HCl is the only free mineral acid to be found in the stomach unless taken in through the mouth.

If no reaction pointing to free HCl has been obtained, or if, with the dimethyl, etc., reagent, you have obtained a reddish color but are uncertain as to its significance, you may make the Uffelmann test for lactic acid, thus :

Add 10 c. c. of a 4% solution of carbolic acid to 20 c. c. of water in which a drop of the official solution of the chloride of iron has been dissolved. Now pour equal quantities of the blue liquid which results into each of the two test-tubes. To one of these add drop by drop a quantity of the stomach contents. If any notable proportion of lactic acid be present the blue will be replaced by a peculiar greenish or citron-yellow color. The change to an ordinary yellow color does not signify lactic acid. The presence of free HCl or of much peptone will prevent this reaction ; but two of the tests just described will give conclusive results. Thus if there be a reaction with the dimethyl, etc., and none with the Uffelmann test there is free HCl and no important proportion of lactic acid present. If there should be a decided and unquestionable response to the Uffelmann test, with or without a reaction to the dimethyl reagent, the presence of a considerable amount of lactic acid would be shown, pointing to either cancer or advanced gastric catarrh with much stagnation and fermentation. In such a case the Guentzburg and other confirmatory tests should always be made and a thorough exploration of the stomach by an expert both externally and internally would be desirable.

Whenever the various tests show an absence of free HCl you should always make the foregoing test for lactic acid, since it is sometimes present in such cases, and may then mean cancer of the stomach, though it is not proof positive of that disease. A very decided response to the Uffelmann test must always raise the suspicion of cancer, or tend to confirm such a suspicion when a tumor can be made out.

In most cases of stomach trouble it is well to make, when possible, numerous other tests, including especially the quantitative test for the total acidity, for the percentage of free HCl, and if the latter be wholly absent the quantity of HCl that has combined with the albumen of the food. Other useful tests usually made by specialists in important cases are those for propeptones and peptones, for pepsin and the rennet ferment, and the amount of starch digestion that has taken place. When no free HCl is

found it is always instructive to ascertain by titration how much of this acid would be necessary to produce a saturation of the albuminoid part of the food present—that is the amount of the deficiency of HCl.

Most of the above-mentioned tests may be easily mastered by the reasonably well-instructed general practitioner and they will be described in future "Talks" as well as the various kinds of test-meals and the best method of obtaining samples of the stomach contents after these.

THE DIAGNOSIS OF NON-VENEREAL SYPHILIS IN ITS EARLY STAGES.

BY ARTHUR VAN HARLINGEN, M.D.

Some thirty years ago, when I was a medical student, we were taught, or at least such teachings as we were given on the subject led us to believe, that syphilis was conveyed in the act of copulation only. A suspicious eruption led to examination of the genitals and to close questioning regarding doubtful and delicate subjects, and the presence or absence of a chancre upon the genitals was sometimes depended upon to settle the diagnosis.

I had not long been in practice, however, before I began to notice that in many cases of undoubted syphilis no history of any lesion of the genitals could be obtained. In women, more particularly, even the most careful examination failed to show the slightest trace of any initial lesion, although from the character of the eruption the infection must have been very recent.

I used to think that the minute size of the initial lesion might account for this. The well-marked indurated chancre as depicted in the text-books is often absent and in its place we find a small, hardly perceptible papule or erosion which is almost concealed among the folds of mucous membrane and readily escapes detection. But I also came to observe that in many similar cases occurring in the male sex the same difficulty occurred in finding a chancre about the genitals, and after a time I was brought to the conclusion that the initial lesion is much more frequently extra-genital than was formerly supposed. Some years ago I collected and published a number of cases of extra-genital chancre which had come under my notice, and other observers, with far greater opportunities for observation than myself, have collected great numbers of such cases, so that the idea of an extra-genital origin for syphilis is no longer unfamiliar.

When a doubtful case of eruption of the skin is brought to one's notice, however, and an examination is had with a view to making a diagnosis, this is oftentimes a very difficult matter. The early eruption of syphilis, that known as the maculo-papular syphiloderm, is extremely varied

in its manifestations. The ordinary form is so often described in books and lectures that even one who is not familiar with it by sight can make a diagnosis by a little study. But there are many cases in which the typical features of the eruption are not presented and where we need every possible aid to decide upon the nature of the disease. Although I have seen a good many cases of every variety of the early syphiloderm, yet I am free to confess that occasionally I meet with a case which, if it does not puzzle me completely, does certainly require every faculty which I can bring to bear upon it in order to come to a positive conclusion. The skin affection most apt to be confounded with the early syphiloderm is that known as *pityriasis maculata et circinata*, a not very uncommon skin affection, but one with which the average practitioner is apparently unfamiliar. Let me advise you to familiarize yourselves with the appearance or at least with the description of pityriasis maculata et circinata before you next have occasion to diagnosticate an early syphilitic eruption. I can not at the present time give the differential diagnosis between the early syphilodermata and other skin affections; these can be gotten from the text-books; but I want to call attention to certain accessory points which aid in the diagnosis in all cases and which, in cases when the skin eruption itself is hard to make out, may give essential assistance.

When confronted with a supposed syphilitic eruption every part of the surface, from head to foot, should be examined where this is at all practicable. Think of the variety and multiplicity of the lesions, which may attack any portion of the integument or its appendages. The hair may fall out, the eyes may show iritis, the mouth, tongue, fauces, any or all, may show the tell-tale mucous patch, and thus one may get a side-light on the case which may be invaluable.

Now, too, in connection with these early eruptions, we have a right to expect some trace of the initial lesion. When the patient has had a chancre of average character on the genitals the trace of this almost always remains visible until the early generalized eruption is pretty well developed. But if there is no sign of any lesion in that locality we should look elsewhere. The mouth is sometimes the seat of the initial lesion, perhaps most frequently so in syphilis of the innocent, or family syphilis, as it may sometimes occur. In physicians the finger is sometimes the seat of infection. But the disease may find entrance at any point. Fourmir, out of 1,124 cases of extra-genital chancres, found 849 about the face and head, 78 on the upper part of the body, 77 in the anal region, 59 on the breasts, 33 on the thorax, abdomen and thighs, 14 on the lower limbs and the same number in the cervical region.

Unfortunately for diagnostic purposes most of these escape observation. A chancre of the lips, tongue or tonsils is usually such a marked lesion that it can scarcely escape observation, but in some other regions, unless the lesion is large, it may entirely escape observation or it may be confounded with some simple pimple or other ordinary lesion. However, insignifi-

cant as the initial lesion may be, it is invariably accompanied by involvement of some of the neighboring glands and a thorough examination of the principal glandular regions will often put one on the track of an almost forgotten initial lesion.

Genital chancres, that is chancres of the penis, scrotum, labia majora and minora, fourchette, meatus urinarius, urethra, opening of the vagina, etc., involve the inguinal glands. The same is the case with peri-genital chancres; chancres of the perineum, genito-crural region, mons veneris, anus, buttochs, thighs, etc. Chancres of the lip and chin involve the submaxillary glands. Chancres of the tongue, the subhyoid glands. Chancres of the eyelid, the preauricular glands. Chancres of the finger, the epitrochlear glands and the axillary glands. Chancres of the arm, the axillary. Chancres of the heart, the axillary and, sometimes, the sub-pectoral glands. Chancres of the cervix uteri involve, theoretically, the pelvic glands; in general there is no engorgement of the groins, exceptionally, inguinal bubo.

By applying these rules conversely we can often get at the seat of the initial lesion and thus aid in making out a diagnosis in doubtful cases.

SELECTIONS AND TRANSLATIONS.

SOME RECENT DECISIVE EXPERIMENTS CONCERNING THE FOOD VALUE OF ALCOHOL.

THE following conclusions concerning the "Influence of Alcohol on Human Metabolism" were arrived at by a series of experiments by Rosemann (specially translated for the INTERNATIONAL MEDICAL MAGAZINE from *Zeitschrift für diätet. und physikal. Ther.*, Vol. I., No. 2):

It appears that alcohol does not possess the power of sparing the albuminous materials. On the contrary, it produces a slight increase in albumen destruction. Disregarding these inconsiderable variations, we find that during the entire test, including the prodromal, alcohol, and after-period there was no change in the nitrogenous equilibrium. The addition of 4500 c. c. of alcohol to the food taken produced no effect whatever on the nitrogenous elimination. The addition of an equivalent number of calories of carbohydrates or fat would unqestionably have had the effect of lessening the nitrogenous output. Alcohol is, therefore, incapable of completely replacing carbohydrates and fats; it has not the power of sparing the albumen in the body.

The results of Schmidt's experiments agree in the main with those of Stammreich and Miura, and afford a much desired confirmation of Miura's

dictum that "the primary effect of alcohol is not to diminish albumen destruction."

If it is admitted, on the one hand, that alcohol does not increase oxygen consumption and carbonic acid production, and, therefore, protects other substances in the body from decomposition, and if it is conceded, on the other hand, that the substance so spared is not albumen, there is but one conclusion possible, namely, that alcohol by its combustion prevents the decomposition of non-nitrogenous substances; it is an economizer of fat. This conclusion agrees very well with the results of practical experience. Theoretically, however, this behavior on the part of alcohol is rather difficult to explain. The most plausible theory is the one advanced by Miura, that alcohol is a feeble protoplasmic poison. It finds support in the experiments of Romeyn, who found that in starving individuals the ingestion of alcohol increased the decomposition of albumen. Moreover, in the experiments of Stammreich and Miura a distinct after-effect of the alcohol was observed in the continued increase of the nitrogenous output two or three days after the alcohol period. This after-effect lasted longer with a non-nitrogenous diet than when the food contained an abundance of albumen. Even Schmidt's experiment is more or less corroborative of this view, since it also shows a slightly increased destruction of albuminous materials as a result of the ingestion of alcohol. The final decision of this question must await further investigations. It is quite easy to suppose that the toxic effect of alcohol on protoplasm is habitually minimized by a rich albuminous diet and by the potent factor of habit, especially if it is conceded that alcohol cannot replace albumen.

The practical significance of these results for the economic value of alcohol is considerable. Henceforth it will have to be viewed in the light of a luxury; for it is valuable only inasmuch as it stores up fat, a not altogether desirable property. But the greatest significance of this inability of alcohol to replace albumen is in connection with dietetic treatment of disease, and I cannot subscribe to Miura's opinion that "the therapeutic value of alcohol is not affected by these experiments" in so far as it refers to the use of alcohol in general in disease. Its stimulant and antipyretic properties are of course unaffected by the results of the experiments, but not so its value as a food stuff, since our principal object in giving it for that purpose is to check the consumption of albumen in the body. It would, indeed, be a bold thing to assert that alcohol, which admittedly does not possess the power of replacing albumen in health, develops that power when the organism is weakened by fever and disease. It is much more likely that alcohol under such circumstances has the opposite effect and rather increases the destruction of albumen, as the very conditions which favor its toxic action on protoplasm, impaired nutrition and inanition, are present in disease.

These questions can only be decided by further experiments on diseased individuals. For the present it is certain that we must abandon the hope

of utilizing the calories of alcohol to economize the supply of albumen in the cells of the body in disease. Alcohol can no longer be considered a weapon in the armory of dietetic therapeutics.

WHAT SHALL THE PHYSICIAN SAY TO A GONORRHŒAL PATIENT WHO WISHES TO MARRY?

Translated especially for the INTERNATIONAL MEDICAL MAGAZINE.

KROMAYER (*Münchner med. Woch'schrift*, No. 24) sums up the question as follows:

If the presence of Neisser's gonococci is demonstrated, the physician's duty is clear and needs no elucidation. But, if the bacteriological examination is negative, his answer should cover the following points:

As a negative bacteriological examination is not an absolute proof of the absence of gonococci, it is the patient's first duty to make an earnest and sustained effort to rid himself of the gonorrhœa or chronic inflammation of the urethra by a systematic course of specific treatment. This is not to be neglected even in cases where the examination has for a long time repeatedly failed to detect gonococci.

If a complete cure is found impossible, or if the patient refuses to subject himself to further treatment, the physician should explain the case under its various aspects, and leave the decision with the patient. In no case is the physician to assume the responsibility of the gonorrhœa not becoming infectious.

If the patient decides to marry, the physician should impress upon him the fact that he is still capable of giving the infection, and must, therefore, observe the following rules in sexual intercourse:

1. Urinate immediately before sexual congress to expel any secretion that may have accumulated in the urethra.

2. Avoid as much as possible having intercourse oftener than once a day.

3. Never perform the act twice in succession because, if the first seminal discharge contain gonococci, the friction attending the second coitus brings them into closer contact with the urethra and cervix, thereby increasing the danger of infection.

If this rule is disregarded, and the act is performed more than once in twenty-four hours, the vagina should be thoroughly flushed out with a vaginal douche, which should, in general, be employed as often as possible.

THE DISCOVERY OF AMERICA.

Prof. de Lollis, who is well known by his researches on Christopher Columbus published under the auspices of the Italian Minister of Public Instruction, has, it appears, satisfied himself from his close study of the original documents that, while to Columbus belongs the honor of having actually discovered America, the existence of the great Western Continent, and the way of reaching it, were first definitely suggested to him by a Florentine named Paolo Toscanelli dal Pozzo, who had taken the degree of Doctor of Medicine at Padua. Toscanelli's name has indeed been mentioned as having confirmed Columbus in his ideas as to the existence of a great undiscovered continent, and when the four hundredth anniversary of the discovery of America was celebrated in 1892 he came in incidentally for a small share of glory; neither on this, or on the other side of the Atlantic, however, did his name appear in the programme of the official demonstrations. This omission is now to be rectified to some extent. On April 17th, the fourth centenary of Toscanelli and Amerigo Vespucci is to be celebrated with much pomp and circumstance at Florence. Toscanelli deserves to be remembered, for it is clear from the evidence produced by de Lollis that without Toscanelli's instructions Columbus would never have gone to seek the East by way of the West, and consequently would not have stumbled on the discovery of America. Columbus went in 1476 to Portugal, where at that time the scheme of transatlantic route had already attracted the attention of the King and his geographers. The moving spirit was Fernan Martins, Canon of Lisbon—himself also a doctor of physic, who had lived some time in Italy, where he had made the acquaintance of Toscanelli.

At the suggestion of Martins, Toscanelli wrote to the King of Portugal a letter dated June 25, 1474, in which he refers to the scheme discussed between them at a previous time for reaching the "land of spices" by a shorter road along the coast of Guinea. In this letter he enclosed a planisphere illustrating his conception of the world as a sphere, and showing how it could be circumnavigated. Columbus placed himself in communication with Toscanelli some time between September, 1479, and August, 1481. He asked the Florentine physician for information, and Toscanelli, in his reply, after referring with approbation to his wish to reach the land where spices are produced, refers him for an answer to his question to the letter and the map which he had sent in 1474 to Fernan Martins. Columbus wrote to him a second time, and in his reply Toscanelli used the following expression; "I perceive your great and magnificent wish to reach the East by the West in the manner shown by the map which I sent you;" and he expressed his satisfaction that the map had been understood, and that the project referred to was looked upon as not

only possible, but certain. Columbus copied with his own hand Toscanelli's letter, and he quotes it in the log of his first voyage, and again in that of his fourth and last. He admits that from this passage he had drawn the arguments which decided the King of Spain to fit out the expedition. Columbus also took Toscanelli's map with him on his voyage. Toscanelli died in 1482, and thus had not the gratification of seeing how the inspiration which he gave bore fruit, though in a way which he had not foreseen. It is an interesting fact that two doctors of medicine should be so closely associated with the discovery which has made the name of Columbus immortal.—*British Medical Journal.*

REVIEW OF MEDICAL AND SURGICAL PROGRESS

INTERNAL MEDICINE GENERALLY.

UNDER THE CHARGE OF

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Treatment of Grippe Pneumonia with Salicylate of Soda. R. Siegel (*Wien. med. Woch'schrift*, No. 19, 1898) strongly advocates salicylate of soda as a curative agent in pneumonia. He uses it in doses of 8 grms. in 24 hours. If there is much pleuritic pain small doses of morphia are added. In addition, ipecac is used as an expectorant. If the temperature remains above 103° he uses applications of ice to the head. He reports 72 cases, every one of which terminated favorably, in spite of the fact that many of them had grave complications. The temperature fell gradually, reaching normal in from 3 to 4½ days after beginning treatment. The pneumonia sputum was modified as the temperature fell, the diplococcus disappearing with the râles. If the treatment was suspended too soon, the patient invariably had a chill, with a return of all the pneumonic symptoms—a veritable relapse. To avoid this it is necessary to continue the salicylate of soda 24 to 48 hours after the temperature has reached normal.

Treatment of Typhoid Fever with Convalescent Serum. C. Walker (*Centralb. für Innere Med.*, No. 37, 1898) has treated five patients with typhoid fever by injecting serum derived from convalescents with most favorable results. Four of the patients were gravely ill with an unfavorable prognosis. In two there was rapid defervescence of temperature, it reaching the normal in the morning on the second or third day after the injection. In two others the good effect was shown principally in the general condition, the appetite being especially improved. In one of these the diarrhœa partially stopped immediately after the injections. In all he noted rapid and considerable variation in the volume of the spleen. There were two relapses, and from this the author argues for the proof of his original grave prognosis and the beneficial effect of the serum. He advises prompt injection of serum on the slightest indication of a relapse.

Diagnosis of the Morphia Habit. Stephen Lett (*Quar. Jour. Ineb.*, Oct., 1898), in an important paper, points out the necessity for the determination of the morphia habit and shows that the existing methods are faulty. Enforced abstinence for 48 hours will show by the condition of the patient that there has been some drug habit, but it might be impossible to decide that this drug was morphia and not chloral, phosphorus, cocaine, paraldehyde, etc., or even alcohol. Then, too, it is often impossible to say that during the supposed total-abstinence period there has not been clandestine morphia-taking. The Bartley test of the urine is subject to certain errors. Some urines, which he is absolutely sure contained no morphia, reacted to the Bartley test. In his own case it was uric acid which gave the reaction, but whether it was the uric acid itself or some substance adhering to it he is unable to state. Sometimes, too, when the patient was known to be taking as much as $2\frac{3}{4}$ grains of morphia in 24 hours the test failed. The author describes a process which eliminates all these elements of error. Collect about 20 oz. (less will do) of the suspected urine. If it has not an acid reaction acidulate with dilute hydrochloric acid until it reddens blue litmus. Concentrate to about 3 oz. and let it stand in a cool place for 12 hours, then filter. To the filtrate add sufficient carbonate of sodium to render it alkaline and let it stand for 12 hours, then filter and collect the precipitate, wash this with distilled water made slightly alkaline by carbonate of sodium and dry. Digest the dried precipitate with pure alcohol at a gentle heat and filter, evaporate the filtrate to dryness, dissolve the residue with dilute sulphuric acid, and test for morphia by the iodic acid or other well-known tests for morphia salts. By this method he has succeeded in obtaining morphia from the urines of patients taking very minute amounts of the drug, and has been able to identify the crystals by means of the microscope, when the Bartley test failed.

Ergot in Chronic Malarias. A. Jacobi (*Med. News*, Oct. 22, 1898), discussing the action of ergot, shows that it must have large effect on the

tissue of the spleen and this has urged him to use it in malaria, believing that it would thrust many of the malarial organisms from the splenic pulp into the general blood current, when they could be destroyed. He cites a number of cases to prove the good results obtained and comes to the conclusion that in many cases of chronic malaria, which have resisted the action of quinine, arsenic, methylene blue, eucalyptus and piperine, ergot is of great benefit. The preparation advised is the solid alcoholic extract. In acute malaria, while ergot is of benefit, quinine is to be preferred.

DISEASES OF THE CHEST.

UNDER THE CHARGE OF

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Observations on Cardiac Syphilis. Dr. Adler (*N. Y. Med. Jour.*, Oct. 22, 1898) records the results of an interesting investigation of the effects of syphilis upon the heart. He endeavors to trace the effect of the disease in all its stages from slight vascular lesions to the stage of gumma. He first examined the hearts of four very young infants with unmistakable evidences of syphilis, in order that he might avoid the possibility of confounding vascular and myocarditic forms due to syphilis with those due to other causes. In one he detected some endarteritis in one of the small arteries, and in another very marked endarteritis with evidences of commencing degeneration of the heart muscle and its replacement by connective tissue. He also examined two hearts from cases of Addison's disease in which gummata of the suprarenal capsules were found. The valves and endocardium of both of these hearts were normal. The patients were between the ages of 30 and 40 years. Both showed extensive endarteritis and areas where the muscle had degenerated and had been replaced by connective tissue. In addition, one heart showed an enormous dilatation of the capillaries and small veins, and small hemorrhages occupying the peri-vascular spaces, pushing their way between the muscle fibers and breaking them into fragments. This condition has also been described by Ehrlich and Mracek, and Adler considers these changes to be very characteristic. He thus demonstrates that at a period of the disease when neither the aorta nor the coronaries exhibit any sign of disease, endarteritic and periarteritic processes may develop in and about the small

vessels in cases of undoubted constitutional syphilis. Numerous cases, especially in young individuals of irritable heart with either bradycardia or more frequently tachycardia, and always with more or less arhythmia, he considers to be often the result of syphilis. Such cases occur in syphilitic subjects, and are decidedly benefited by mercury and iodide. Adler agrees with Hallopeau, Rumpf and others that angina pectoris may be due directly to syphilis. He reports a case of myocarditis with acute dilatation of the heart and angina pectoris associated with a distinct history of syphilis, and the outbreak of fresh syphilitic lesions in the sternum and ribs. There were no signs of arterio-sclerosis. During a period of two months there were repeated attacks of angina. He remarks that the fact that he improved considerably after mercurial inunctions indicates that the disease is doubtless of syphilitic origin. He also states, as the ground for this assumption, that the patient did not improve upon digitalis. [It is interesting to note that the patient improved after the digitalis was stopped and when signs of dilatation of the heart set in. The patient has had no more attacks of angina, but he is subject still to attacks of palpitation and heart weakness, a condition that was not present while the paroxysms of pain persisted. It is hard to understand how mercurial inunction could have improved the already existing fibrous thickening of the coronary artery. It is possible that there is some connection between the dilatation and the consequent relief of intra-vascular tension and the cessation of the attacks.] Adler concludes that an absolutely positive diagnosis of heart syphilis can rarely be made, but in various cases, in which the etiology is not absolutely clear, the anti-syphilitic treatment should be resorted to.

1. Cardiac Epilepsy in General and the Senile Arterio-sclerotic Epilepsy. 2. Cardiac Epilepsy. 1. F. Mohnert (*Wien. med. Woch'schrift*, 1898, 33–35) reports 3 cases of this condition. All those forms of epilepsy, in which the cause is some disturbance of the circulatory apparatus, are known as cardiac epilepsy. A subdivision of this group may be made, which includes the variety more properly known as senile arterio-sclerotic epilepsy. The characteristic of this form is that the first attack occurs in advanced age in individuals with an outspoken arterio-sclerosis. It is probable that, through a narrowing of the vessels, a chronic anemia of the brain is produced, which causes in its turn disturbances of the various centers and produces the condition that leads to the epileptic seizures. In addition another explanation may be given, namely, that the chronic inflammatory processes in the walls of the arteries of the brain must cause disturbances in the tissues surrounding them through an extension of the inflammation from their walls. Also, the endarteritic blood vessels are thicker and more rigid than normal and must cause some pressure, and so increase the tendency already present to epileptic outbreaks. He treats the condition by attention to the cause of the attack, and reduces their frequency by sedatives. The remedies most to be relied upon are the bromides,

arsenic and iron. 2. Hermann Beer, of Vienna (*Klin.-therap. Woch'-schrift.*, 1898), reports the case of a woman aged 43 years who had been troubled with occasional symptoms of heart weakness since her seventh year. She was taken suddenly with an attack of unconsciousness, dilated pupils not responsive to light, reflexes gone, a bloody froth at the mouth, swollen jugular veins, deep and regular breathing, pulse small, slow and regular, and loss of power over the sphincters. There were no convulsions. The attack lasted but a short time and the patient was but little the worse except for a bite of her tongue. She had never before had any such attack nor was there a family history of such an affection. A month later there was a recurrence of the condition with well-marked psychical aura. There was much hypertrophy of both ventricles of the heart and symptoms of failing compensation, due probably to emphysema. Beer considers the case to be *sui generis*, since there was no arterio-sclerosis, or valve lesions which usually are present in case of cardiac epilepsy. The explanation, as he gives it, is that the condition is a form of reflex epilepsy brought about by irritation of the termination of the vagi through hypertrophy and dilatation of the heart muscle.

DISEASES OF THE DIGESTIVE SYSTEM.

UNDER THE CHARGE OF
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Chronic Dilatation of the Stomach Associated With Chronic Gastric Catarrh. Maynard (*Brit. Med. Jour.*, Oct. 15, 1898) reports having examined, during eleven months, eighty-seven cases of chronic catarrh of the stomach and found in nineteen of them chronic dilatation. He explains that he classed all stomachs as dilated which extended to within an inch of the umbilicus. His diagnosis of dilatation was based upon percussion (unaided apparently by auscultatory percussion or auscultatory friction) and upon the splashing sound heard over the organ on palpation. In many of the cases he also produced artificial inflation by effervescing powders. [No mention is made of the method by which he reached the diagnosis of gastric catarrh, which is more difficult to make than that of dilatation, and one is by no means warranted in classing as dilated every stomach the greater curvature of which is at the level of one inch above the navel. Chronic gastric catarrh and dilatation are very often associated, but statistics so loosely gathered as the foregoing prove nothing. B. R.]

The Indications for the Employment of Hydrochloric Acid in Affections of the Stomach. In his Lyons thesis of 1898 Perran says that, although hydrochloric acid is already old as a therapeutic remedy for diseases of the stomach, authors are still far from agreeing on the cases in which it should be employed, and, above all, as to the quantity of the drug to be employed. Indeed, while certain clinicians prescribe from fifteen to thirty minims per day, others administer much larger doses. In the work on this thesis Perrand describes the favorable effects produced by large doses of hydrochloric acid taken according to the method employed with success by Dr. C. Tournier in his private practice, as also by Dr. Lépine, of Lyons. Dr. Tournier gives hydrochloric acid in the French official dose of from three to four grammes (ℳxlv–3j) per day, in the following manner: the patient takes fifteen drops of the acid a few minutes after finishing each of the two principal meals, then at the end of half an hour he takes another fifteen drops and lastly, in certain cases, he again takes fifteen drops after an interval of thirty minutes. This method of taking hydrochloric acid is about the same as that employed by Dr. Ewald, who prescribes fifteen drops of the acid three or four times at quarter-hour intervals. However the hydrochloric acid of the German pharmacopeia contains 0.25 % of the gaseous acid, while that of the French pharmacopeia contains about 0.35 %. Tournier therefore employs a larger dose than Ewald. Thus administered the hydrochloric acid would be tolerated and its use prolonged without inconvenience for several months. This medication is indicated in gastric hypochloridity in general and especially in lienteric diarrhea accompanied by extreme hypoacidity of the contents of the stomach. These patients had very slightly accentuated gastric disorders. One observes neither palpitation nor swelling, neither pain nor flatulence. Gastric movements are preserved and even exaggerated, and the chemical analysis alone shows that the fault lies in a lack of acid in the contents of the stomach. But there is always a lienteric diarrhea occurring generally after each meal, and this disappears in four or five days under the influence of the acid treatment, although it had resisted all other remedies. A second group of cases, where the use of large doses of hydrochloric acid produces good results, is constituted by certain gastric conditions with functional hypochloridia, which may be observed in neurasthenic patients, and shows itself especially in alimentary vomitings with no burning sensations nor accompanied by soreness. The use of hydrochloric acid in these cases does not fail to control these vomitings. Lastly this drug is especially useful in cases of gastric catarrh with hypochloridia of alcoholic origin, when the troubles consist more especially of alimentary vomitings, distensions, sensations of weight after meals, insomnia and loss of appetite. The conditions which might constitute a formal contraindication to the use of hydrochloric acid are those in which the gastric troubles are accompanied by a pronounced hyperesthesia of the mucous membrane of the stomach for all acids. It is easy to understand the favorable influence exercised by hy-

drochloric acid in cases of gastric catarrh in conjunction with hypoacidity; indeed, physiology teaches us that this acid favors the secretion of the gastric juice, the emptying of the stomach and the disappearance of mucus; further, that it acts as an antiseptic, and lastly that it is an excitant of the pancreatic secretion. It is, above all, this last property which Tournier invokes in order to explain the curative action of hydrochloric acid in cases of lienteric diarrhea.

Caries of the Teeth and Diseases of the Stomach. Aaron (*Charleston Med. Jour.*, Oct., 1898) states that caries is produced by the acid-fermentation set up by micro-organisms. Over 22 kinds of germs, concerned in caries, have been isolated. The empty stomach always contains germs, and, contrary to the general belief, the HCl of the gastric juice, while inhibiting up to a certain degree the process of fermentation, does not completely destroy the germs in the stomach. When caries exists, some of the germs from the teeth may become incorporated with the food, enter the stomach and there develop giving rise to various disturbances. The multiplication of the micro-organisms and their products induce a state of hyperemia, and then a hypertrophic condition of the mucous membrane of the stomach, which becomes covered with a heavy, viscid, ropy, tenacious mucus. The food is not digested and acts as an irritant. The proteolitic process yields to fermentation. It must be remembered that not all micro-organisms that excite inflammation are pyogenic. Germs which usually produce pus in interstitial tissue, developing on mucous membranes only produce a chronic inflammation.

NEUROLOGY.

UNDER THE CHARGE OF
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Some Further Notes on the Use of Bromide of Strontium in Epilepsy. Roche (*Lancet*, Oct. 15, 1898, No. 3920) supplements his work of 1896, and expresses the opinion that the use of bromide of strontium for a long time may render the patient free from seizures during the time the drug is administered, and may even result in a "cure." These "cured" patients, however, must continue the use of the remedy even though there is no return of the attacks. The drug does not produce after-effects, and is not as depressing or as poisonous as bromide of potassium. Three drachms daily for weeks have been used without causing unpleasant symptoms. Bromide of strontium is recommended to be given in doses of thirty grains in a vegetable infusion. Patients with prolonged aura can take half a drachm

every hour and may thus avert an impending seizure. Efficient dosage and continuous administration are necessary for good results.

A Case of Hysterical Contraction of the Forearm Successfully Treated by Suggestion. Millick (*Lancet*, Oct. 15, 1898, No. 3920) records the case of a girl, nine years of age, suffering with mitral disease, who had at different times hysterical contraction of the left hand and forearm, with paresis of the muscles of the left foot and contraction of the toes. No sensory disturbances, no atrophy, no electrical changes were observed, but other signs of hysteria were present. The conditions improved under suggestion. The case is interesting by reason of the age of the patient, the recurrence of the contraction and paresis, and the locality affected. The presence of an organic heart lesion rendered the absolute differentiation of the condition somewhat difficult for a time.

Contribution to the Question of the Origin of the Facial Nerve. Bruce (*Scot. Med. and Surg. Jour.*, V. 3, No. 5, Nov., 1898) endeavors to explain two well-known clinical facts, namely, that the muscles supplied by the seventh nerve are not equally affected in lesions involving the facial muscles or the central fibers of the facial nerve, but are equally paralyzed in peripheral lesions of this nerve. The hypothesis that muscles habitually associated are innervated equally from both sides of the cerebrum explains why, in hemiplegia, all the muscles of one-half of the face may be partially paralyzed and power quickly return. Each hemisphere of the cerebrum sends motor fibers to both sides of the central nervous axis, but the supply to the opposite side is usually much greater than that to the same side, hence we have paralysis of the muscles of the opposite side, and weakness of those of the same side in destruction of one motor tract. When, after a unilateral lesion, bilateral movement remains, the crossed and direct nerve supply are nearly equal. In nuclear diseases of the seventh nerve the muscles of the lower half of the face are principally affected. This suggests the possibility of different nuclei innervating the facial fibers. Some writers trace the fibers for the orbicularis oris to the hypoglossal nucleus. Bruce, however, insists that the relationship between the movements of the tongue and lips is not as close as alleged, or, if it is, the relationship may be cortical. He has found no trace of communication between the facial nucleus and the posterior longitudinal fasciculus, but at the upper end of the knee of the facial nerve he found a bundle of fibers which cross the mesial line and enter the posterior longitudinal fasciculus of the opposite side. This bundle, he states, is part of the facial root and not part of the arcuate system. The fibers turn upward after crossing, indicating that their nucleus of origin is possibly at a higher level than the main nucleus. By reason of the immunity of the upper muscles of the face in amyotrophic lateral sclerosis, innervation of those muscles by this bundle of fibers is suggested. Summing up, Bruce concludes that the evidence

does not point to an origin of the fibers for the orbicularis oris in the hypoglossal nucleus. There is a crossed root for the facial nerve which can be traced upward through the posterior longitudinal fasciculus, and this is probably concerned in the innervation of the upper face muscles. [Some recent anatomical studies on the facial nerve indicate that the upper and lower branches of this nerve have their cells of origin close to one another.]

MEDICAL DISEASES OF THE KIDNEYS.

UNDER THE CHARGE OF
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Unilateral Albuminuric Retinitis; with Report of a Case. Pyle (*Phil. Med. Jour.*, Nov., 1898) thinks that albuminuric retinitis is often unilateral, the other eye becoming involved by the time the patient consults an oculist. In the interesting case he reports, unilateral albuminuric retinitis existed for a period of five years without affecting the sound eye. Considering the various theories advanced in explanation of the one-sidedness of the retinitis the author thinks that the only positive data could be furnished by a separate catheterization of the ureters, as this would be the only means of finding out whether only one kidney is diseased and if so which one it is. He mentions an instrument recently devised by Neumann for that purpose. It is constructed like a Japanese fan, which can be withdrawn into the handle. The instrument is inserted into the bladder and the fan opened. The convex border approximates accurately the posterior vesical wall, and thus two separate compartments are formed. As to prognosis the author concludes that the simple apoplectic form of albuminuric retinitis is the least dangerous to life, and if the symptoms are not very severe and can be controlled by medication and diet, the retinitis is not a fatal prognostic sign so long as it remains unilateral.

On Fused Kidneys. McMurrich (*Intern. Jour. of Surg.*, Nov., 1898) presented before the Michigan State Medical Society a case of fused or so-called "horseshoe" kidneys. The organ was on the left side provided with two separate ureters which opened into the right and left side of the bladder. Seven distinct arteries entered the fused organs accompanied by the same number of veins. Such cases are very rare, Morris having found only 9 in 14,000 cases. From the study of this and similar cases the author draws the conclusion that crossed dystocia and fusion of the kidney do not appear to predispose to disease of the organ. With regard to location it has been found on the right side in 40 % of the recorded

cases, while on the left in 60. 78 % were males and 22 % females. It is important to bear this abnormality in mind in cases of proposed nephrectomy.

The Treatment of Chronic Renal Disease. Tirard (*Therap. Gaz.*, Vol. XXII.), in a paper read before the British Medical Association discusses the treatment of nephritis. He divides chronic renal disease into chronic nephritis, renal cirrhosis and lardaceous disease. The first usually follows an acute attack, the second begins insidiously and runs a very chronic course, and the third usually results from some chronic suppurative processes. Chronic nephritis is often accompanied by subacute attacks which may be mistaken for acute nephritis. The history of the case is, therefore, very important. The course of chronic nephritis largely depends on the number of subacute attacks, and it is of paramount importance to diminish their frequency, or prevent their occurrence. This can be largely accomplished by proper hygienic, dietetic and, to a lesser extent, medicinal measures. It is prejudicial to keep the patient in perfect idleness. Moderate exercise not only improves metabolism, but removes the tendency of the patient to mental depression. In one case, where the patient indulged in golf, cricket and hunting, the disease remained stationary for a period of twenty years. The diet should be wholesome, but not too restricted. With regard to alcohol, it is generally better not to interfere with the habits of the individual, unless the consumption be excessive. He puts forward the claim that it aids their digestion and prevents the mental depression which total abstinence in such cases would, he says, produce. The medicinal treatment is largely symptomatic. In one case diuretin produced the desired effect when digitalis and other diuretics failed. Iodide of potash also produces a marked diuretic effect even in cases that are not syphilitic. Astringents are useful, but they tend to produce indigestion. Pilocarpine is one of the best diaphoretics, but it often increases the heart's action to a dangerous extent, lowers the blood pressure by depressing the heart muscle, and sometimes produces collapse, nausea, vomiting and diarrhea. This drug is often contraindicated also on account of its favoring rapid transudation and edema of the lungs. As an hypnotic sulfonal is the best. It is possible gradually to diminish the dose when the habit of sleeplessness is once broken. For convulsive seizures croton oil is the most efficacious, as it can be administered to unconscious patients, and it acts with great rapidity.

Albuminuria. A. K. Stone (*Bost. Med. and Surg. Jour.*, 1898) used the heat-and-nitric-acid tests in a series of 1,248 cases, exclusively women from the woman's out-patient department of the Massachusetts General Hospital. For the most part the patients showed some symptoms which suggested the desirability of a urinary examination. Those who were without doubt nephritic cases, or cardiac cases with dilatation and venous

stasis and cases where there were well-determined degenerative conditions such as tuberculosis, were excluded. Albumen was found in 298 of the total number, or 23.08 per cent. The highest percentage, 31, was found between the ages of 15 and 20 years. For the next three decades the figures are practically the same, 22 per cent.; until, when the age of 50 is passed, they rise to 26 per cent. as would be expected from senile changes. In considering the causation of the albuminuria, he believes, the most weight should be laid on an overpowering amount of work being put on the epithelial cells. Extensive vascular changes can take place in interstitial nephritis without the presence of any albumen whatever. Such a condition of overwork may be produced in various ways. Excessive feeding of albuminoids, excessive exercise, or drugs, especially mercury, or toxins in the blood, from whatever source derived, may, by lessening the ability of the renal cells to perform their normal function, cause the albumen to escape.

DERMATOLOGY.

UNDER THE CHARGE OF
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The Exanthemata of Tuberculosis. C. Boeck (*Arch. für Dermat. u. Syph.*, XLII., S. 71, 1898) understands as tubercular exanthemata those skin eruptions only which, "although the tubercle bacillus cannot be demonstrated in them, are nevertheless so frequent or so constant an occurrence in individuals that sooner or later, show themselves to be infected with tuberculosis, that one is almost forced to connect them with that disease." We are dealing here with a remote action of the bacillus most likely brought about by means of its toxins. In these exanthemata the author includes, first of all, a characteristic form of skin affection described by himself, in 1880, as lupus erythematosus disseminatus and since by other authors under different names, folliculis, hydroadenitis, destruens, suppurativa, etc. Its primary efflorescence consists of a very small erythematous macule or papule rising from a deeper seated nodule; this either develops further with a firmly attached scale, or a small necrotic area forms in its middle in the shape of a pustule or scab-covered loss of substance, which in healing leaves a very characteristic punctiform scar. The clinical appearance resembles on that account more frequently acne than lupus erythematosus. That the affection really belongs to the latter disease is shown by the histological appearances corresponding in both cases, and the not rare simultaneous occurrence of both affections in the same patient. The author found this disease, which he had described, always in scrofulo-

tubercular individuals and often associated with a lichen scrofulosorum, or there were transition stages to this, also, in the sense of the dermatoses he is describing, as tubercular exanthemata. As a third variety of eruption belonging here, the author describes an eczema scrofulosorum which no less often shows the transition to and association with, lichen scrofulosorum. It occurs most commonly in older children and young adults and appears as more or less infiltrated, reddish or yellowish-red, macules or patches often forming ring- or arch-shaped figures and only scaly or partly moist and covered partly with crusts. Areas of predilection for this slightly itching, comparatively easily cured, but frequently relapsing, exanthema are the anterior and posterior surfaces of the thorax and upper and lower extremities. The hairy scalp is very often subject to pityriasis or a weeping or impetiginous eczema seborrhea asbutosa. Slight cases of this eruption are said to be quite common. The author finally includes lupus erythematosus discoides in the exanthemata of tuberculosis ; in 36 of his cases, 24 were in scrofulo-tubercular individuals, of the other 12, one-half had tubercular near relatives. In consideration of the tendency of these eruptions to symmetrical distribution, Boeck considers it probable that they are due to the action of the toxin of the tubercle bacillus on certain nerve centers.

Three Cases of Tattoo Syphilis. W. T. Thomas (*Brit. Jour. of Derm.*, Nov., 1898) reports that a travelling salesman, while at Garston, tattooed many sailors and four residents of the town. He used his saliva in moistening the skin before pricking in the designs. All of the four residents developed chancres in the tattoo marks, three of them especially reported having been treated at the Royal Infirmary, Liverpool. The sailors, shortly after being ornamented, sailed for foreign ports and are yet to be heard from. The tattooer was known to be syphilitic.

PEDIATRICS.

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Enlargement of the Lingual Tonsil as a Cause of Cough. Beverly Robinson (*N. Y. Med. Jour.*, Oct. 1, 1898, Vol. LXVIII., No. 14) calls attention to the importance of studying carefully recurring attacks of inflammation of the lingual tonsil which are frequently overlooked. The physician too often does not possess sufficient skill to enable him to make the necessarily thorough and frequent examinations and hence the condi-

tion remains unrecognized. The continued cough is likely to become confused with other states such as beginning pertussis; whereas, the causes are the same as others which produce facial congestion or irritation. There is an irritative cough with little or no expectoration, but in a day or two there begins a frothy secretion and later a small amount of tough thick muco-purulent sputum sometimes streaked with blood, and becoming worse on lying down. There is frequently a sense of stricture in the throat on one or both sides, without fever or pain. The lingual tonsil appears red and swollen, the left one more enlarged than the right. The condition lasts from one to two weeks. The proper treatment is the local application of iodine in glycerine; external counter-irritation and the inhalation of warm stimulating or sedative antiseptic vapors, of which creosote or cresolin is the best.

Value of the Buccal Eruption of Measles (Koplik) for Early Diagnosis. E. Libman (*Med. Rec.*, 1898) adds confirmation of this by a series of reported cases. Koplik's original article in the *Archiv. Pediat.*, Dec., 1896, created little interest and until his later article in *Med. Rec.*, April, 1898, which was followed by one on the subject from Heubner's clinic by Slawyk (*Deutsche med. Woch'schrift*, April 28, 1898) which fully confirms all the statements made by Koplik. Libman reports fifty cases, in every one of which the spots were present in large numbers on the buccal mucous membrane and in some cases on the lips. In a number of children constantly examined, after having been exposed to measles, these spots were seen in from twenty-four to forty-eight hours before other evidences of the disease appeared. He calls attention to the fact that the early symptoms of measles are often atypical; in other cases, children having catarrhal symptoms may develop eruptions which are independent of any exanthem or due to septic manifestations or drugs.

The American Pediatric Society's Collective Investigation on Infantile Scurvy in North America. (*N. Y. Med. Rec.*, 1898.) The committee appointed for this purpose, J. P. Crozier Griffith, Charles G. Jennings and John Lovett Morse, have presented a very valuable contribution to the study of a disease which has received but little attention in pediatric literature. They have collected 379 cases seen by 138 observers. As to race, in 372 cases there were 367 white, 4 black and one Chinese. Sex is of little significance, but age proves to be an important matter. The disease is most apt to develop between the ages of seven and fourteen months inclusive. A study of the social position of the sufferer brings out the fact that, of 379 cases, 83% occurred in private practice, going to show the tendency of the disease to occur among the rich or well-to-do. In 303 cases the hygienic conditions were described as good, many times of the best. In five they were doubtful, and in only forty were they described as bad. As to previous health, out of 285 cases suitable for study,

167 had enjoyed previously good health; 118 had suffered from various disease conditions, most of which were accidental, and few of these were digestive disturbances. Family history appeared to exert little or no influence; diet is the most important etiological factor. A careful review of the symptoms (which, in many instances, were not stated with any consecutive accuracy) in 327 cases, can be arranged as follows: first symptoms seen: pain and tenderness, 145; affection of gums, 42; interference with motion, 36; anemia, 27; cutaneous hemorrhages, 22; swellings, 16; restlessness, 6; anorexia, 5; debility, 5; diarrhea, 5; constipation, 2; hemorrhage from nose, 1; hemorrhage from mouth, 1; hemorrhage from rectum, 1; hematuria, 3; "hematoma of tongue," 1; irritability, 3; vomiting, 1; fever, 1; opisthotonos, 1; sweating, 1. Interferences with motion are variously described as paralysis, pseudo-paralysis and disability or unwillingness to move; probably all dependent upon pain, since there is no evidence that actual paralysis occurred. The position of the limbs in seventeen instances was normal, and in other instances, when described, was various. Swellings seem to have exhibited great irregularity in situation and character. Swelling in the soft tissues, 97; sub-periosteal, 114; in both situations, 16. In 69 cases the swollen parts were also reddened; there was none in 121; of a more general character or edema, 68 cases; absent in 98. The condition of the gums and mouth is of extreme interest. In 16 cases they were unaffected, while in 313 they were diseased, the degree of involvement varying from slight swelling to great sponginess. The gums may be affected equally well when there are no teeth as when teeth have developed. Cutaneous hemorrhages occurred in 182 cases and were absent in 171. Hemorrhage from mucous membranes occurred in 164 cases and was absent in 196. Fractures were only reported in 9 cases. Fever was not shown to be a prominent symptom of the disease. The bowel movements varied broadly. The urine was not always examined; albumen was found in 33 cases out of 163 examined; tube casts in 13. Anemia is reported to have been present in 254 cases, and emaciation in 167; absent in 50. Rickets received especial attention, but the answers are not very exact. In 152 cases there were symptoms of rickets present; in 198 absent. There does not seem to be an intimate association of rickets and scurvy. The duration of illness is shown to be essentially chronic, its course terminating only on the institution of proper treatment. In prognosis, under proper treatment, nothing is more striking than the rapidity with which recovery takes place. In the matter of treatment, it was difficult to learn what measures were efficacious *per se*, because, in most instances various factors were combined, dietetic and medicinal from the first.

On Thrush. Langford Symes (*Med. Press*, Sept. 28, 1898) notes that in the decade ending with 1896 there died in Ireland 218 children under five years of age from this disease. It is known to be the re-

sult of a fungus or vegetable parasite, but of exactly what species has not yet been certainly determined. Its growth is favored by an acid medium, and it most easily attacks weakly infants with unclean mouths. Thrush is a common cause of excoriation of the nates. The author describes at length the familiar symptoms, and for treatment advises wiping off with a dry rag the specks of fungus, and applying a glycerite of borax or of weak carbolic acid or some other antiseptic. Strict cleanliness as regards the child's mouth, feeding bottle, etc., are recommended for fermentation in the stomach and intestines. The author particularly condemns the admixture of honey with the antiseptic applied to the mouth on account of the readiness with which it ferments and thus aggravates the difficulty.

THERAPEUTICS.

UNDER THE CHARGE OF
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Male Fern and its Dangers. In an article on the dangers attending the use of Extr. filicis maris or male fern, Sidler-Huguenin (*Correspondenzblatt für Schweitzer Aertze*, No. 17, 1898) dwells particularly on the frequent occurrence of atrophy of the optic nerve as a result of overdoses. Grave intoxications by filix mas manifest themselves as disturbances of the central nervous mechanism of the stomach and intestines and cause death by a general central paralysis. Of 78 cases collected by the author, 12 terminated fatally; in 44, temporary or permanent disease of the optic nerve was the principal lesion. The principal symptoms of the amblyopia were: dilated, non-reacting pupils and the ophthalmoscopic picture of simple atrophy of the optic nerve, viz., gray or white discoloration of the optic nerve, with contracted retinal arteries. Among the symptoms observed in less severe cases of intoxication are enumerated nausea, fainting-fits, drowsiness, tinnitus aurium, headache, a general feeling of lassitude, tremors, frequent singultus, icterus, more marked in the face, diminished quantity of urine, and albumen with hyaline casts in the urine. As a light case frequently develops into a serious one the treatment should be discontinued as soon as the first symptoms of intoxication make their appearance, often after the first two or three doses. All attempts to separate the active vermifuge principle from the toxic ingredients have failed; as in many other drugs, the toxic substance and the active principle appear to be identical. "There are two forms of filicic acid which differ in their physiological action; a crystalline, inactive, and an amorphous, active, form. The inert

crystalline product stands in the relation of an anhydride or lactone to the amorphous precipitate, which is the true filicic acid; the name *filicin* has been suggested by Troumsdorf for the former (and now adopted)." Filicic acid, though readily dissolved by the intestinal secretions, is not rapidly absorbed, and should, therefore, kill or drive out the parasites without injuring the host. As the percentage of acid in the various extracts varies with the age and origin of the preparation, no limits can be set for a therapeutic and a toxic dose. Poullson and Quirll have found that the absorbability and therefore the toxic effect of the extract is greatly increased by the admixture of castor oil or any other oily substance. In 57% of the 78 cases collected by Sidler-Huguenin castor oil was given along with the extract. The author recommends the following precautions: The extract. filicis maris should be freshly prepared from plants gathered in the fall and coming from the same locality (the German variety is the best), so as to insure uniformity in the doses. If the preparation is not fresh, the patient must be directed to "shake before using." Castor oil or any other oleaginous drug must not be administered either before or after the extract is given. If a purge is necessary use a salt. Special care is necessary in anæmic, badly nourished, or young subjects. The drug is to be withdrawn on the first appearance of toxic symptoms, however slight they may be. In severe intoxications administer hypodermatic injections of ether or camphor, or other excitants. It is advisable to try pure, freshly-prepared filicic acid, as the doses can be more easily regulated than with the ethereal extract.

Urotropine in the Treatment of Cystitis. T. Gordon Kelly (Dub.) (*Therapist*, No. 10, Vol. VIII., 1898) mentions several cases in which he used this drug with success and believes that the remedial effects are due to the antiseptic properties of formaldehyde. Chemically it is hexamethylen-telainin and is formed by four molecules of ammonia and six of formaldehyde. It was first introduced into medicine by Professor Nicolaier, of Göttingen, and it is believed by him that it dissolves uric acid, thus acting upon concretions along the urinary passages. The author, however, has not had enough experience with it in disorders of that kind to give an opinion. In his case 7½ grs. were given three times a day in ½ pt. of aërated water and reduced as the case progressed, although in some stubborn cases he raised it as high as 20 grs. Some authors have reported a slight burning in the bladder after its administration, but none of his cases experienced any discomfort. Upon testing the urine it was detected as early as 15 minutes after administration and could be recognized as late as 13 hours afterwards. In some cases where the urine is alkaline, it is better to administer small doses of sulphuric acid in conjunction with the drug, the acid causing it to disintegrate in the bladder more readily.

Tannoform in Children's Diseases. Johann Landau (*Klin.-therap. Woch'schrift*, Wien, Vol. V., No. 40) mentions the use of this drug in cases

of skin disorders, such as eczemas, herpes zoster, applied externally in 5% and 10% ointments, and internally in diseases of the stomach and intestines, and intestines alone when of a catarrhal nature. When given by the mouth it lacks that disagreeable taste of most astringents, and can be taken without upsetting the stomach, and for these two reasons it is easily administered to children. His conclusions are: (1) That tannoform is a good intestinal astringent, and besides its astringent action it is antiseptic. (2) Having no taste or odor it is easily given to children. It is not costly. (3) In acute stomach and intestinal disorders, in follicular enteritis, and also in chronic catarrh, it is a valuable remedy. (4) In eczemas of the face and head it gives speedy relief.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF
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A New Micrococcus with a Note on the Bacteriology of Lymphadenoma. John Hill Abram (*Jour. of Path. and Bact.*, Vol. 5, No. 3,[1] 1898) recommends the method of Sittman for obtaining blood for bacteriologic purposes. Skin on the forearm is sterilized by some approved method, and a wet 1–1000 corrosive sublimate dressing is applied for at least two hours. The blood is then drawn, by means of a hypodermic needle, from one of the superficial veins. It is plated in the usual manner. The author records the finding of the staphylococcus albus in the blood which he believes to have been, in this case, due to an existing secondary infection which had produced the slight rise of temperature at the time the blood was taken. In addition to the staphylococcus he found a small micrococcus, non-motile, aggregated in clumps, staining well by the usual methods, not by Gram's method. Gelatin plate, 21° C.: Slow growth. Colony circular, surface finely granular, margin regular; slow liquefaction. Gelatin stab: Growth faster at surface than in depth; slow liquefaction reaching wall of tube in six days. Agar plate, 37° C.: Fairly rapid growth on surface, colony round, regular edges. Agar stroke: Growth fairly rapid, is slimy and resembles a streak of white paint. Potato: Good growth; culture raised, dark red, no staining of potato substance. Milk: No coagulation. Broth: Abundant growth; powdery sediment. Turns litmus agar red. Glucose gelatine, 21° C.: No gas formation. The author reviews the literature of the subject and comes to the conclusion that if the morbid condition is produced by a germ, it has not yet been isolated.

[1] The 4 articles following have been abstracted from this number.

Mouse Favus. Abram reports an epidemic of favus in the mice of a local sugar refinery. Portions of the crusts were rubbed down with sterile sand in a sterile mortar, the resulting mixture distributed in melted agar and plated in the usual manner. In addition to pyogenic cocci the favus parasite was isolated and typical favus produced in mice and rats.

The Durability of Passive Diphtheria Immunity. Bulloch (Brit. Inst. of Prevent. Med.) after reviewing the literature of the subject, records an experiment made upon a donkey. Twenty-five thousand units were administered. After going into the detail of the experiment the following conclusions were made: (1) "That almost the whole of the diphtheria antitoxin introduced subcutaneously, rapidly enters the blood serum (serotropism); (2) that after a day or two it rapidly disappears; (3) that the disappearance is not due to excretion by the kidneys; (4) that the remainder persists, in gradually diminishing quantities, for a period varying probably with the amount of antitoxin introduced."

A Review of the Pathology of Superficial Burns, with a Contribution to Our Knowledge of the Pathological Changes in the Organs in Cases of Rapidly Fatal Burns. Dr. Charles Russell Bardeen (*Johns Hopkins Reports*, Vol. VII., No. 3) believes that in the five cases studied by him death was due to acute toxemia, and thinks this should be taken into account in the treatment of all cases of burns, although the theories of vaso-motor changes and thrombosis may, no doubt, have good foundation, and may also enter into the cause of death; at present, however, the methods at hand are too crude to develop any light along this line. Another factor which he thinks may be the cause of death is injury to internal organs. He does not believe in the theory that the destruction of the blood corpuscles themselves produce this change, but that it may be the presence in the plasma of poisonous substances. As for the many other theories advanced, few have any evidence at all to support them. The post-mortem changes were similar in all cases with slight variation. The burns were extensive, although superficial. The epithelium had been peeled off in places, but did not seem to extend deeper than the subcutaneous tissue. Upon opening the thorax the pleuræ were found to be normal. Lungs slightly congested and edematous. Heart and pericardium normal. Thymus gland was congested, lymphatic glands were swollen and congested. In the abdominal cavity the peritoneum was slightly congested. Liver pale and cloudy. Spleen enlarged and soft with prominent malpighian bodies. Kidneys pale; cortex cloudy. Stomach and intestines showed marked swelling of the solitary follicles throughout. These enlarged lymphatic patches were often surrounded by a slightly hyperemic zone. Abdominal lymph glands were all swollen and some were congested. Brain negative. Microscopic examination of the tissues showed great degeneration of all lymphatic structures. In the spleen the malpighian bodies showed focal

degeneration and fragmentation of red corpuscles, fragments being free and also contained in phagocytes. Parenchymatous degeneration of the kidneys and liver. Thrombi were found in the skin, usually; rarely in other tissues. He has devoted himself more especially to the study of the lymphatic system which seems to suffer most; and believes it is due to the absorption of the poison, produced by the burn, being carried by the lymph channels to the glands, and being of such toxic power destroys them; as occurring in diphtheria, etc., or artificially produced by the infection of vicine or abrin. The reason burns are more often fatal among children than older people is due to the thinness of their skin; as shown by experiments upon animals, the thick-skinned enduring much better than the thin.

W. S. N.

CLIMATOLOGY AND HYGIENE.

UNDER THE CHARGE OF
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Value of the Climate of the Adirondack Mountains in the Treatment of Tuberculosis. Dr. John H. Musser, in a discussion before the American Climatological Association, Sept. 1, 1898, said: "There are some cases which we must send away for reasons that present all the contraindications at the time for such steps. I recall one instance, the case of a young man who was taken ill with localized tuberculosis with marked systemic symptoms. Certainly there was excessive consolidation at the apex, and the man had high fever, rapid emaciation, sweats, etc. I advised, notwithstanding his weakness and fever, that he attempt to get to the Adirondacks, because our heated term in Philadelphia was approaching. He took my advice, although it was given with great misgivings. He put himself under the care of Dr. Trudeau, who told his mother he did not believe he would live ten days or two weeks in that region. Nevertheless, a residence of nine months under the care of Dr. Trudeau resulted in a complete cure, at least an arrest of all manifestations of the disease. It occurred three years ago, and he is perfectly well and strong, and is attending to his duties in Philadelphia at the present time. This was a case which, to all intents and purposes, we should never have thought of sending away, and yet, because of the conditions he would have been surrounded with in his home, at the time I thought it advisable to take the step, and, fortunately for us all, the result justified the means.

Preservatives—Adulteration of Food and Drugs. Charles R. Tichborne (*Med. Press and Circ.*, Sept. 21, 1898) discusses the ques-

tion of the use of preservatives in food products, such as boric acid, salicylic acid, formaldehyde, calcium bisulphite, etc. Some analysts are for prohibiting their use altogether. Others say they may be used in limited and restricted quantities, whilst the manufacturers say we have a right to use them in unrestricted quantities as long as they produce wholesome products. Tichborne maintains that such questions should first be dealt with by a board who will approach the question from a judicial and unbiassed position, and no manufacturer should be allowed to use any substance for such purpose if not permitted. If a preservative is allowed the amount allowable should be specified and the food products named in which it is permissible, they should never be allowed to be used in quantities for the purpose of making weight. Salt, alcohol, spices, hops and many other things have long been employed and no one would think of objecting to their use because we know their properties so well.

SURGERY.

UNDER THE CHARGE OF

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Gonorrheal Vulvovaginitis in Children. B. Feinberg (*St. Petersb. med. Woch.*, No. 8, 1898) reports the case of a child six and one-half years old, infected by her mother, who developed a peritonitis and died in five days. The cause of the peritonitis was apparently a gonorrheal infection, though this was not definitely established.

Tagliacotian Operation. This method of transplanting skin and subcutaneous adipose tissue flaps has of late become almost obsolete. W. More (*Intercol. Med. Jour. of Austral.*, Aug. 20, 1898) points out the effect which anti- and aseptic methods have had upon its possibilities and shows how and where it may be used with particular advantage, detailing the technic which has enabled him to procure valuable and satisfactory results in a number of instances where Thiersch grafting has been unsuccessful. He also describes a novel method of covering the raw surface of a skin and subcutaneous fat flap by Thiersch grafts, before it is applied where both sides are exposed, as in the formation of a nose or the filling of a complete defect of the cheek.

A New Method in Castration. As a result of his experience in castration for the removal of malignant testicular disease Pantaloni (*Gaz. Méd. de Paris*, Oct., 1898) believes that in operating for the removal of a malig-

nant growth on the testicle a formal operation is indicated, commencing with an incision along the outer border of the rectus muscle and passing down into the scrotum. This enables the operator to follow the cord down into the pelvis and remove the retro-peritoneal glands that have become the seat of metastases. Such a radical procedure is as reasonable here as the clearing of the axilla in operations upon cancer of the breast, if a permanent cure is hoped for.

Inguinal Hernia in Childhood. In discussing the causation and treatment of this condition in children, R. H. Russel (*Intercol. Med. Jour. of Austral.*, Aug. 20, 1898) advances some radically new theories, and states that he has been entirely successful with no mortality in twenty-nine cases in which he operated and has had no recurrences. Basing his theory on the anatomical construction of the inguinal canal, he believes hernia is prevented by the sphincteric action of the muscles that cover the canal which is aroused when any effort is made that would expel the intestines into the canal. He also holds that the viscera only succeed in entering it when a funicular pouch of peritoneum persists and renders the way easy and prevention difficult. The sole object in treatment is the removal of this sac ; when this is once accomplished the hernia will not return—at least he has seen no recurrence. He believes that the so-called cures by trusses are not absolute, though the hernia may never again come down. He advises the radical operation by the simple removal of the sac in all cases of children, believing they are far safer after it, that it is shorter in curing, and that the cure is more permanent and sure than that procured by a truss.

A Bullet Located in the Hyoglossus Muscle by Means of the X-Ray. A case was reported before the French Academy of Medicine in which Marcus and Boisson (*Gaz. des Hop.*, Sept. 22, 1898) succeeded with the aid of the X-rays in locating and removing from the hyoglossus muscle a bullet, which was causing pain and a certain amount of dysphagia. The patient was also the subject of an hysterical hemiplegia which disappeared after the operation.

The Treatment of Tuberculosis of the Bones and Joints. The ground work of all treatment of tubercular conditions of the bones and joints is summarized by P. Klemm (*St. Petersb. med. Woch.*, No. 39, 1898) as follows: Of the greatest importance is early diagnosis conjoined with fixation and rest in bed. As the symptoms subside ambulatory apparatus may be substituted and finally splints that may be removed temporarily. The greater the deformity that needs correction the more severe will be the effect on the patient. Treatment should be directed to the individual case and not by the routine preference of the surgeon. Iodoform injections are good in certain cases where they can be mixed with the tubercular material. Abscesses and necrotic tissue should be removed either by aspira-

tion or incision and then the cavity treated with iodoform. Operation is indicated by an increase in the tubercular pus, or by mixed infection with variations in the temperature. Arthrotomy and arthrectomy are to be preferred to typical resection. Ankylosis should be avoided if a joint can be maintained. General hygienic treatment is of great value. Sanataria are great helps in suppressing the disease.

Traumatic Stricture of Intestines. The Question of Employing a Button Instead of a Suture of the Intestine. Sokolow (*Medicinskoe Obosrenie*, St. Petersburg, Oct., 1898) is greatly in favor of the use of the button in intestinal surgery. The round stitch is complicated, consumes a great deal more time, and besides can only be successfully done by an expert surgeon. All these considerations are of sufficient importance, especially in the country, to make the use of the button preferable. The objections to the latter are merely theoretical. He prefers the button devised by Frank to Murphy's. The former is much simpler and can be made by the surgeon himself. He reports two interesting cases, showing that the use of Frank's button was followed by most excellent results.

A. R.

LARYNGOLOGY AND RHINOLOGY.

UNDER THE CHARGE OF

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Adenoids in Adults. P. Hellat (*St. Petersb. med. Woch.*, No. 25–26, 1898, and *Deuts. med. Zeit.*, No. 71, 1898) says though adenoids are easily diagnosticated in infants, yet in adults the symptoms are not at all characteristic. He admits that adenoids generally disappear with puberty, but thinks that they do not entirely vanish. The symptoms in adults more or less systemized are nervous affections, failure of memory, respiratory affections, headaches and alterations of taste and smell, as well as lesions of the ear, nose, nasopharynx and larynx. The number of cases seen by the author during the last year was seventy, of which number thirty-nine were operated on. In most of the cases operated on there was much improvement and never a complication. The operation can be done by the cautery, by tearing away, by curetting or by excision. After the author's experience excision with the knife of Gottstein is the best. With adults the operation is less bloody than with children. In one case only was the hemorrhage so great that it was necessary to use tampons. It is always preferable to have an assistant. The pain is generally localized in the neck and can be borne by the patient. The wound is healed

by the end of two or three weeks. A return is very rare when the growth has been fully removed.

Treatment of Large Tonsils by Internal Massage. Kantorowicz (*Deuts. med. Zeit.*, No. 63, 1898). Introduce the index finger as far back as possible behind the tonsil, then make from fifteen to twenty circular movements around the tonsil and then the same number from top to bottom. These movements have as their object the emptying of the lymphatic spaces. After three or four movements the patient is allowed to rest a few moments, and the duration of the entire treatment should last but a short time. The tonsils should be pressed on rather hard, because it causes less irritation. The disagreeable sensations felt by the patient gradually disappear. The author has seen tonsils very large and red diminish in volume by the end of fourteen sittings, so that their surfaces did not protrude beyond the anterior margin of the pillars. To prevent his being bitten the author inserts a piece of rubber in preference to a metallic gag, which would interfere with the free movement of the finger. In conclusion, the following figures are given as to the relation of caries in the teeth to enlarged tonsils. In 75 cases of tonsils bilaterally enlarged there were 296 teeth with cavities, and in 24 cases of tonsils enlarged on one side only, there were cavities in 101 teeth. Without basing a theory on these figures the author asks, "If more care were given to the teeth would there not be fewer cases of enlarged tonsils?"

Eversion of the Ventricle of the Larynx. Noack, of Lyon (*Rev. Heb. de Lar. de Otol., et de Rhinol.*, Oct. 29, 1898), after reviewing the commonly accepted causes of ventricular eversion, not only discredits these etiologic beliefs, but also considers the term itself a misnomer. His arguments and their antitheses follow: (1) Monton and Mackenzie considered the condition due to a genuine eversion of the mucous lining of the ventricle. Solis-Cohen and Elsberg endorsed this view of eversion of the ventricular mucosa. Against this Noack contends that spontaneous or simple eversion of the mucous membrane of the ventricle of Morgagni is impossible, because of the character of the insertion of that membrane in the subjacent planes, quoting Sappey as his authority. (2) To Leffert's later view that a chronic inflammation of the mucous membrane with hypertrophy of the sub-epithelial connective tissue produced the condition, a belief held also by Fränkel, who substituted hyperplasia for hypertrophy, he admits that acute inflammation of the ventricular mucosa at the level of its superior border [the inferior border of the ventricular band] can, up to a certain point, simulate eversion. (3) Noack believes that the affection improperly called eversion of the ventricle is due to the presence of a tumor arising elsewhere and insinuating itself into the mucous or its adnexa. The inflammation accompanying such a tumor should be taken into consideration. (4) Also, that a histologic examination is necessary to substantiate the diagnosis.

OPHTHALMOLOGY.

UNDER THE CHARGE OF

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Dislocation of the Eyeball by Forcible Blowing of the Nose. Schanz (*Beiträge zur Augenheilk.*, Heft XXXIV., 1898) gives a brief summary of the literature of this subject, describes several accidents of similar nature, and reports a new case. The accident is usually in persons with lax skin about the lids and orbit and poor general muscular tone, or in persons already affected with some degree of exophthalmos. Straining at stool, coughing, sneezing, blowing the nose and even slight muscular strains have caused luxation of the globe in such cases.

Sudden Paralysis of the Ciliary Muscle of Asthenopic Origin. Jacqueau (*Lyon Méd.*, Sept. 4, 1898), reasoning on the basis of excessive ciliary spasm in uncorrected hyperopia, states that this strain sometimes leads to sudden paralysis of accommodation from complete exhaustion of ciliary innervation. We should be on the lookout for such a cause in cases of sudden failure of accommodation without suspicion of cranial or spinal disease. Refraction under additional cycloplegia by atropine, if possible, is the first step in treatment. Rest and strychnia are also indicated.

Crystals of Cocaine in Preference to Solution. Bronner (*Brit. Med. Jour.*, Aug. 20, 1898) says that in deep operations, such as iridectomy in glaucoma and cataract extraction, where crystals of cocaine are used rather than the solution, the pain is less and there is less tendency to spasm of the ocular muscles and consequent loss of vitreous and prolapse of the iris. He has never seen toxic effects follow the application of crystals. The crystals cause a burning pain and should be preceded by a weak solution. About ¼ gr. of the crystal is applied to the sclero-corneal junction where the incision is to be made. The eyelids are kept open for a few seconds, and then closed four or five minutes. Bronner also prefers the crystals in tenotomies and advancements, and before using the galvanocautery.

Diseases of the Lacrimal Passage—Their Causes and Management. Connor (*Jour. of the Am. Med. Ass.*, 1898), in a logical paper on Lacrimal Diseases, arrived at the following conclusions: (1) Among the predisposing causes of diseases of the lacrimal passages are such defects of structure as flattening of the bony canal or other irregularities and defects of refraction. (2) Syphilis, gout, phthisis, scrofula, or any of the infectious diseases may cause lacrimal disorder. (3) Among the local causes are conjunctivitis at the upper end of the lacrimal passage, and nasal disease at the other end, the morbid process in either instance spreading to the canal nearest. (4) The management of any case will never overlook

the bearings of any constitutional disease; especially does antispecific treatment furnish gratifying results. (5) All defects of the refraction should be corrected under a mydriatic and muscular equilibrium assured. (6) Diseases of the conjunctiva and eyelids, as well as all nasal disease, should be removed. (7) The treatment of the lacrimal passage with aseptic solutions through small syringes, or the forced washing by Gould's method, and the systematic external use of hot water, contribute to better results in all forms of these disorders. (8) The puncta should be rendered pervious, and their position against the eyeball assured by local treatment if possible or, this failing, by operation, so that the ends of the canaliculi may be fully within the lacrimal lake. (9) Strictures should be located by probes and either dilated or divided by instruments, the extent of the operations depending upon the nature of each special case. (10) Cases treated early in the disease give uniformly good results; those attended with large destruction of tissue are less hopeful, the epiphora often remaining in spite of treatment, but they are protected against the danger of future attacks of dacryocystitis.

GYNECOLOGY.

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Another View of Conservative Surgery of the Tubes and Ovaries. Coe (*Med. News*, 1898) reviews the recent advances in conservative surgery of the adnexa and submits the following conclusions: (1) Conservative operations on the adnexa are to be commended in properly selected cases. The surgeon should avoid, on the one hand, tampering with ovaries that are the seat of slight cystic degeneration or cirrhosis, and, on the other, trying to preserve supposed normal tissue in organs which show such extensive disease that it is doubtful whether the best interests of the patient (both immediate and remote) would not be served by complete removal. In many cases it is advisable to simply separate adhesions. As there is no way of preventing their reformation, it is better to suture prolapsed tubes and ovaries at their normal level in the pelvis. (2) *Anatomical Results.*—In a certain proportion of cases resected ovaries undergo complete atrophy; in others the stromal remains may form the starting-points of cysts, requiring a second operation for their removal. A tube which has been rendered patent or resected, may again become occluded, or may form a hydrosalpinx or tubo-ovarian cyst. (3) *Symptomatic Results.*—These are

often entirely satisfactory as regards the relief from pain and dysmenorrhea, the preservation of the functions of ovulation, and the occurrence of conception. Per contra, constant pain and dysmenorrhea may persist, menstruation may be absent, scanty, or excessive, and pregnancy is so far the exception that it is to be regarded as an unusually fortunate sequence. In any case, we are not in a position to affirm how far conception following resection of the adnexa is directly due to this procedure, or how far to the accompanying treatment—curettement, separation of adhesions, restoration of the general health, improved sexual relations, etc. Our main object is the avoidance of the premature climacteric. (4) As regards technic, experience has shown that more successful conservative work can be done by the abdominal route, for reasons that are obvious, *i. e.*, thorough separation of adhesions, suture of raw surfaces, checking of hemorrhage, avoidance of drainage, etc. Catgut is preferable as a suture material. (5) As a corollary to the above, emphasis should be laid on the fact that, since the surgeon can never know the exact condition of the adnexa before opening the abdomen, he must not allow himself to be bound by any positive promise as to his course of procedure at the operating-table. While he should endeavor to preserve healthy organs and tissues whenever this is possible, and must necessarily be guided to a considerable extent by the expressed wishes of the patient, he must not be persuaded against his better judgment to practice conservatism at the immediate risk of her life or to court ultimate failure in order to give her the more than doubtful chance of future pregnancy.

[No class of cases demand more careful judgment as to when a radical operative procedure shall be pursued. As organs cannot be replaced when once removed, the tendency should be to err on the conservative side, but in doing so the operator must appreciate that he will at times meet with cases when a secondary operation will be necessary; the mere interference apparently acting as a stimulus to the redevelopment of trouble. Thus, the writer in one patient broke up adhesions, opened a tube, united it to the corresponding ovary with the hope that the function of procreation might be preserved in a case in which it was necessary to remove the other ovary and tube on account of a large ovarian cyst. Within less than two years following the ovary and tube remaining had formed as large a cyst as the first one. In another case a woman had suffered from amenorrhea for eight years; though married had never been pregnant. The left ovary was as large as a walnut. The right contained a number of small cysts. The former was removed, the latter punctured in these cysts by thermocautery. After her recovery from the operation her menses returned, menstruating regularly thereafter, although at this writing, something over two years subsequent to the operation, she has not become pregnant.—Ed.]

The Graver Nerve Disturbances Due to Organic Changes in the Genital Organs. W. H. Humiston (*Amer. Jour. Obstet.*, Nov., 1898) de-

fends those who would remove diseased pelvic organs for the relief of mental or nervous diseases, and argues that if an ocular defect, chronic malaria and similar conditions will produce neurasthenia or nervous weakness, that organic disease of the uterus and its appendages will also produce a similar condition. He believes that gynecologists should jointly make some effort to secure for the women confined in our county and state institutions for the insane, such surgical measures as will, in a large proportion of cases, be a curative means for their mental ailment; and which must, in a vastly greater proportion, at least, improve their condition both mentally and physically.

[Assent to the above should be limited, first to those cases in which it can be demonstrated that there do exist local diseases of the uterus or its appendages which are capable of producing influences upon the mental health of the individual. 2d. Those patients should be excepted in whom destructive changes in the nervous system have taken place which are beyond repair, even though it may appear that they originated as a result of pelvic disease. Certainly no patient should be subjected to operation simply because she was insane; nor should such operation be withheld where the conditions are favorable for relief as a result of it, even though this relief may not be permanent in character. The writer saw one patient who had suffered from suicidal mania for two years, who for nearly two years had complete respite after the removal of a fibroid tumor. During this time she was able to go about, take care of herself, enjoy life and be a comfort to herself and friends. At the end of the period, however, she again became violently insane and her life terminated in the acute attack.—Ed.]

On the Etiology of Ovarian Hernia. Michajlow (*Medicinskoe Obosrenie*, St. Petersburg, Nov., 1898) reports a case of a woman, 62 years old, who presented a swelling in the right groin. It had existed for several years and was reducible, until finally reduction became impossible, and pains, at times severe, appeared. Herniotomy revealed a cystic ovary in the sac. The ovary was removed, and patient recovered.

A. R.

OBSTETRICS.

UNDER THE CHARGE OF
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Lecturer on Clinical and Operative Obstetrics in the University of Pennsylvania; Physician-in-Charge, Preston Retreat; Gynecologist to the Methodist Hospital; Visiting Obstetrician to the Philadelphia Hospital,
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Camden, N. J.,
Obstetrician and Gynecologist to the Cooper Hospital.

Extra-uterine Pregnancy with Report of Case. G. D. Nutt (*Penn. Med. Jour.*, Nov., 1898) and others who commented upon his article are of the opinion that every case of ectopic gestation is a case for operation. For even should the clot become absorbed there would result more inflammatory changes than from operation. Then, too, there is always the danger of degeneration of the clot and infection of the patient. The use of electricity in the treatment of these cases does not seem to meet with approval. The two methods of operating, *i. e.*, abdominal and vaginal, have each their advocates. When adhesions are extensive or where a clear operation is desired the abdominal operation appears the more rational.

W. F. C.

Four Cases of Cesarean Section. Robert Jardine (*Scottish Med. and Surg. Jour.*, Nov., 1898) gives careful notes on four cases of Cesarean section. The first two were successful, the last two fatal. One of the latter was complicated by septic vaginitis, which probably travelled through the incision made in the uterus and produced a septic peritonitis. The fourth case was complicated by a nephritis and a pneumonia. From a study of these and similar cases the following conclusions are drawn: (1) Uterine hemorrhage at time of incision is best controlled by Cameron's method of pressing a slightly curved pessary on the uterus and cutting inside of this. (2) The incision is best made from the fundus four inches in a longitudinal direction. (3) The best material for suturing is still open for discussion and experiment. If we could sterilize catgut sufficiently well, it would doubtless be the best as it lasts long enough.

W. F. C.

Two Cases of Extra-uterine Pregnancy Coincident with a Normal Pregnancy. Leon Desquin (*La Presse Méd. Belge*, Oct., 1898) discusses two cases of ectopic gestation in which normal pregnancy was, at the same time, present. The first case was that of D. M., who entered the Hospital Ste Elizabeth, presenting the symptoms of threatened abortion. Delivery of a two months' fetus with its placenta was followed in three days by an elevation of temperature, violent pains in the abdomen and vomiting. On examination there was found in the Douglas cul-de-sac a soft tumor. Ectopic gestation with rupture of the sac was thought of at

this time. The patient was watched carefully for eleven days and then exploratory incision made over Poupart's ligament on the right side. Numerous adhesions of intestines to abdominal wall caused the operator to close the incision. Five days after the operation was done in the median line. In the right oviduct was a ruptured sac. The placenta was removed, but no fetus was found. Patient made a slow recovery. The second case presented similar symptoms, the patient recovering.

W. F. C.

Eclampsia. B. S. Pollak (*Penn. Med. Jour.*, 1898) in discussing the treatment of eclampsia advises measures to secure diaphoresis and catharsis, and to control convulsions for which chloroform and chloral have shown best results. The use of veratrum viride has reduced the mortality, according to Jewett, to 18 per cent. The following mortalities were recorded in the largest American maternities in 1892: Bellevue Hospital, New York, 46.1%; The Philadelphia Lying-in Hospital, 100%; The Boston Lying-in Hospital, 31.3%; The Baltimore Lying-in Hospital, 60%; The Montreal Hospital 50%. Average mortality of 46 per cent.

W. F. C.

On the Etiology of Utero-intestinal Fistulæ. Mjasnikow (*Medicinskoe Obosrenie*, St. Petersburg, Oct., 1898) reports a case of this rare condition. A woman, 23 years old, after a difficult labor lasting for 3 days was finally delivered by the aid of forceps of a dead child. The placenta was removed on the following day by the village midwife (!). Septic inflammation followed. On examination it was found that the feces oozed from the external os. A laparotomy performed about a month after the confinement disclosed numerous fibrous adhesions of the pelvic organs with the intestines. At the fundus an opening was found communicating with the intestine. The adhesions were broken up, the fistula closed, and the patient made an uneventful recovery.

A. R.

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Edited by

BOARDMAN REED, M.D.

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PHILADELPHIA, DECEMBER, 1898.

The Ratio of Tuberculosis to Population in New Jersey.

Dr. Guy Hinsdale, Secretary of the American Climatological Association, has made a careful study of the statistics contained in the last annual report of the State Board of Health of New Jersey with regard to the distribution of tuberculosis. The mortality from this disease in the State is markedly declining. Contrary to what might have been expected, neither altitude nor the character of the soil seems to have any noteworthy influence in the prevalence of the disease. Dr. Hinsdale's article, which appeared in the *Philadelphia Medical Journal* of October 22d, illustrated the subject graphically by a carefully prepared chart. The counties of Hudson, Essex, Union and Passaic, which have less than one acre to each inhabitant, all show an unusually high death-rate from tuberculosis. On the other hand, Dr. Hinsdale points out, that Atlantic (including Atlantic City), Sussex, Cape May, Monmouth and Ocean counties, all of which, except Sussex, are on the sea, have a low death-rate from the same cause. It averages about one-half as much as in the more populous counties.

The fact is that our zealous friends, who practice in the mountain resorts, have somewhat overworked the theory that high altitude and dryness of air are the chief desiderata in a climate. These qualities are doubtless of advantage in many cases, if not in all, but the fact needs to be borne in mind, that a better oxygenation of the blood with the purest air possible is above all needed. Patients in the earliest stages of phthisis, may be hopefully treated in any seashore or country place, where the sanitation is good and the population not dense enough to interfere with the purity of the air.

It is plenty of uncontaminated oxygen which is the *sine qua non* in the cure; and an improvement in the quality of the blood and thus of the nutrition generally is the chief means to the end. There is something, no doubt, in the involuntary pulmonary gymnastics which help to expand the lungs and promote deep respiration in high altitudes, but the same results can be obtained at lower levels by carefully arranged exercises. Let it be understood, then, that high and dry stations are probably the best for tubercular lung diseases as a rule; but that the pure air of the seaside or country anywhere is better than that of cities or large towns.

Typhoid Fever; Its Prevention and Its Treatment.

Our editorial of last month on the subject of the prevention of typhoid fever proved timely. On the very day that number of the INTERNATIONAL appeared, several ordinances were introduced in the Councils of Philadelphia, providing for various schemes to put money into the pockets of the enterprising promoters in return for alleged improvements over slow sand filtration. All such mechanical devices have proved unsatisfactory elsewhere and the authorities of Philadelphia should disregard them. Every physician in every city where there is a doubtful water supply should constitute himself a committee of one to agitate in favor of improving it. When there is a polluted water supply let medical influence be used in favor of sand filtration without any claptrap mechanical accessories, and especially without the addition of alum or other drugs to aid in the purification. These when regularly ingested are all dangerous to health, even though the dose be small.

But, until that millennial period when pure politics shall make pure water supplies universal, there will be typhoid fever, and another question of burning importance is how to treat it so as most certainly to lessen its severity, duration and mortality. We believe that the Brandt baths, when they are practicable, afford one promising way of combating it, and that there are also other effective methods of treatment. We have no patience with the advocates of a do-nothing policy in this disease, and confess to much sympathy with the sentiments expressed by Dr. W. E. Hughes, of Rockford, Ohio, in a recent communication to the *Medical Record*. He wrote in criticism of an article in the same journal on "The Medical Aspects of Camp Management at Chickamauga," in which the writer said, relative to typhoid fever: "As to treatment there is little to be said except in a negative way. * * * None of the so-called abortive or curative methods was attempted. * * * No idea was entertained that the typhoid bacteria could be reached in the glandular structures of the sub-

mucosa of the gut." Dr. Hughes in reply points to the fact that large numbers of country practitioners, undeterred by the fulminations of teachers, who, ignoring clinical experience, have been misled by an imperfectly developed pathology, are lessening the mortality by antiseptic and eliminative treatment. He explains that by neutralizing and sweeping out the poisonous bacterial products good results may be accomplished even though the bacteria themselves are not destroyed. If not, why not?

Remarkably favorable results are reported from abroad by injecting serum taken from patients convalescing from the fever. An abstract on this subject appears in the department of Internal Medicine Generally under Review of Medical and Surgical Progress in the present number of the INTERNATIONAL.

Crowded Out.

A large part of the matter prepared for this December number of the INTERNATIONAL has been crowded out on account of the space required for the index of the volume. Among the articles postponed for this reason to the January number are important "Talks," Editorials and Book Reviews, besides numerous abstracts, Practical Notes, etc.

Attention is called to a stroke of enterprise begun in this number of the INTERNATIONAL. We have arranged to obtain regularly the leading Russian medical journals and to have special translations and abstracts made from them by one of our collaborators, Dr. A. Robin, himself a Russian. Some of these journals have already been received and a few abstracts from them will be found under "Review of Medical and Surgical Progress" in this issue. In the January number there will appear a translation of an unusually interesting article from one of these journals.

BOOK-REVIEWS.

Electricity in the Diagnosis and Treatment of Diseases of the Nose, Throat and Ear, with 161 illustrations. By W. Scheppegrell, A.M., M.D., Ex-Vice-President American Laryngological, Rhinological and Otological Society; Vice-President Western Ophthalmologic and Oto-Laryngologic Association; late Assistant Surgeon to the Eye, Ear, Nose and Throat Hospital, New Orleans; Vice-President New Orleans Electric Society; Co-Editor *Annals of Otology, Rhinology, Laryngology;* Associate Editor of *The Laryngoscope;* Collaborator, *The Revue Internationale de Rhinologie, Otologie, et Laryngologie;* Member American Academy of Medicine, etc., New Orleans, La. New York and London, G. P. Putnam's Sons. 1898.

My first impulse when I had finished the perusal of this book was to take it up again and read it through a second time. New, instructive, clear, concise, the subject is covered with a thoroughness that is minute and with an impartiality that is commendable That the author is a practical electrician as well as a specialist of ability in his line of work, the attention paid to the minutiæ of electrical technique and its medical appliance ably attests. Every practitioner cannot combine within himself a practical working knowledge of electricity and the medical *pros* and *cons* of its applicability in given cases. To him, however, who would command just such an ability, Dr. Sheppegrell's work is invaluable. Beginning with an exposition of the fundamental principles of electricity, each separate diverticulum of this wonderful entity is lucidly explained. Electricity as an illuminant and motor, galvanism and the induced current, the cauterant property of the current, electrolysis and cataphoresis, electro-magnetisms, the X-rays, are in turn given, followed by the indications for their use and their mode of appliance in the diagnosis and treatment of diseases of the ear, nose and throat. No subject is slighted, each being impartially and minutely discussed. Such appliances as have proven useful and durable in the hands of the author are commended and the reason for the failure of others clearly set forth. Possessed neither with the *furor operandi* nor with an ultra conservatism, the author impartially gives the modes of treatment that have obtained the best results not only in his hands but also the methods of others that have proved successful.

The book is attractively bound, the print, paper and illustrations excellent. The mistakes are so few that they can be dismissed with a word, the only typographical error being glossodynea, page 182, though this is properly spelled in indexing. We, however, are slightly at a loss to determine just at what point the *œsophagus bifurcates*, as is twice referred to on page 88.

The Medical News Visiting List. Published in four styles: Weekly, dated, for 30 patients; Monthly, undated, for 120 patients per month; perpetual, undated, for 30 patients per week per year, and perpetual, undated, for 60 patients per week per year (without text). Price $1.25. Thumb-letter index 25 cents extra. Lea Bros. & Co.

A reminder is necessary to the busy practitioner. This visiting list will remind him of his accounts and a great many practical points essential at the bedside. It is of convenient size and handsome appearance.

PERSONAL.

Professor Stricker's Successor. Professor Philip Knoll, the Professor of Experimental Pathology at the German University of Prague, is to succeed to the Chair of Experimental Pathology at the University of Vienna, made vacant by the death of Professor Stricker last year.

Dr. Wm. Pepper's memory was honored by a distinguished assemblage in the chapel of the University of Pennsylvania on the evening of Nov. 29th. Governor Hastings presided, and the speakers included Dr. S. Weir Mitchell, Dr. James Tyson, General Isaac Wintar and Dr. Wm. P. Wilson, among others representing the various organizations with which the late Dr. Pepper was prominently identified.

Dr. John Guiteras, Professor of Pathology in the University of Pennsylvania, noted for his services in connection with various yellow fever epidemics, and for his prominence in the movement for Cuban independence, has resigned his chair to take effect next October. He will then spend a year in travel abroad, after which he will reside and practice in Havana.

PRACTICAL NOTES.

Action of Bacteria on the Kidneys. Dr. Eüttener concludes from a number of experiments performed by himself and others that pathogenic bacteria may be excreted by normal kidneys and liver without producing any lesions in these organs. It is only when they are pathologically changed that the bacteria produce infection.

A Case of Abnormal Position of Urethra in the Female (Epispadia). Lipjakow (*Medicinskoe Obosrenie*, Nov., 1898) reports a case of a woman, 22 years old, who was complaining of incontinence. On examination the meatus urinarius was found above the clitoris in the right half of the præputii clitoridis. The opening was quite large, admitting a No. 15 Hegar's dilator.

MEDICAL NEWS AND MISCELLANY.

A new use for gastric juice. Some ingenious Italians cause geese or ducks to swallow poor imitations of antique coins or medals, and when these reappear they have a coat of verdigris and are corroded in a fashion to deceive the most expert (?) numismatist.

A Case of Polymastia. Dr. Wm. N. Beggs, in a recent lecture, presented before the class a tubercular patient having two supernumerary nipples; the one on the right side being connected with an accessory mammary gland.

Pan-American Medical Congress. Dr. Charles A. L. Reed, Secretary, has announced that in response to the request of the Government of Venezuela the third Pan-American Medical Congress, which was to have, been held in Caracas in the present month, has been postponed for one year. The grounds for the postponement were first the rebellion which involved that country, and subsequently a severe epidemic of smallpox, which has absorbed the time and activities of the physicians there.

Sense of Feeling in a Lost Limb. A Washington correspondent in the *Literary Digest* says: My left leg was amputated at the middle third of the thigh over thirty-four years ago. The sensation of knee, foot, heel, hollow of foot, and toes being present is stronger than in the other limb. In fact, when at rest, one is not conscious of any sensation in his limbs in a state of health; but in the stump the sensation is ever there, sometimes painfully so. This is no hallucination, but is due to anatomical and physiological reasons.

Nerves of sensation pass out from the spinal column to every part of the surface of the body, each nerve having its own particular part to supply, and each conveying to the nerve-center knowledge that its terminal point is being irritated. Thus, a nerve terminating in the end of the big toe, no matter where it is irritated between the nerve-center and the end of the toe, will say to the nerve-center, "The end of the big toe is touched or hurt." When a leg is amputated, all these nerves are gathered together and covered in by the healing of the stump, and it sometimes happens that they are firmly bound down by the cicatrix and, as it hardens, pressing upon them, sensations of pain occur, *not* at the end of the stump, but *at the point where each nerve terminated.* Just before storms, when the barometric pressure is light, the air within the tissues expands and presses on these nerve-ends, causing intense pain sometimes, and there is no relief but to reamputate the limb and see that the nerves are not caught in the cicatrix. It is generally the stump that perishes away and becomes small that gives the most annoyance.

My leg was amputated in such a position that when I stand it seems to be flexed with the foot behind me, and I have often tried to remove it from the way of persons passing, and have even tried to put it out to prevent the slamming of a door behind me, and, much to my surprise, the door did not stop. I have had many a fall in trying to walk, when, springing up quickly, I tried to put my foot to the floor. I have seen comrades whose legs were amputated below the knee, when on crutches, try to put the foot down and so come heavily on the end of the stump.

As I grow older there is a sense of shortening in the leg, the foot seeming to come nearer the body. If I move the muscles of the stump, as in the effort to extend the knee, a sensation of great heat occurs at once in the stump, when it may be almost frozen with cold. Dry heat sometimes relieves pain in these stumps, but nothing will relieve permanently except an operation, as above stated.

Atlantic City, which long since earned the distinction of being considered the greatest of American health resorts, is still adding to its conveniences and attractions. A new city hospital was recently opened there, and the fashionable driving avenue of the town is being paved.

PRESCRIPTIONS USED BY PROMINENT THERAPEUTISTS.

For pruritus of the scrotum, Leistikoff recommends:

℞.	Hydrarg. bichlorid.,	gr. viij.
	Alcohol,	
	Aquæ chamomil.,	āā f℥vj.
	Chloroform,	gtt. v.
	Aquæ camphor,	q. s. ad f℥iij.—M.
S.	Lotion.	

Palatable Effervescent Quinine.

℞.	Quininæ sulphatis,	4.
	Acidi citrici,	10.
	Syr. simplicis,	
	Syr. aurant. cort.,	āā 1.
	Aquæ destill.,	q. s. ad 20.—M.

S. Add 10 or more drops to about 50 grams of water in which 0.3 gm. of bicarbonate of sodium has previously been dissolved, and drink while effervescing.

—*Klin.-therap. Woch'schrift*, No. 14, 1898.

Tonic Pills in Locomotor Ataxia. For the tonic treatment prescribed after a course of mercurials the following formula is used by Erb:

℞.	Ferri lactatis,	gr. xl–lxxx.
	Ext. cinchonæ,	℥j–gr. lxxx.
	Ext. nucis vomicæ,	gr. v xv.
	Ext. gentianæ,	q. s. —M.
	Ft. pil. No. xl.	
S.	One or two pills three times a day after meals.	

For Acute Tonsilitis.

℞.	Tincture of aconite,	f℥ss.
	Chloroform water,	f℥ij.
	Distilled water,	f℥iv.—M.

S. One teaspoonful every five minutes for twelve doses; thereafter, one teaspoonful every hour. If necessary repeat in same manner.

—Foy (*Atlanta Med. and Surg. Jour.*).

For Irritable Bladder.

℞.	Salol,	℥ij.
	Tinct. hyosciami,	f℥ij.
	Infus. buchu,	q. s. f℥vj.—M.

S. One teaspoonful three times daily.

—*Louisville Med. Month.*

For Hay Fever.

℞.	Ac. acetic,	♏ ij.
	Resorcin,	gr. iss.
	Sodii chlorid.,	gr. iv.
	Aquæ,	f℥j.—M.

S. To be used frequently as a nasal douche. In conjunction with the nasal douching large doses of hydrochloric acid are to be taken, well diluted with water.

The treatment is said to be followed by most excellent results.—Strangways (*Southwestern Med. and Surg. Jour.*).

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